1962

The Effects of Make-Work Rules on Railroad Revenue.

Philip Duriez
Louisiana State University and Agricultural & Mechanical College

THE EFFECTS OF MAKE-WORK RULES ON RAILROAD REVENUE

A Dissertation

Submitted to the Graduate Faculty of the
Louisiana State University and
Agricultural and Mechanical College
in partial fulfillment of the
requirements for the degree of
Doctor of Philosophy

in

The Department of Economics

by
Philip Duriez
B.A., New Mexico Western College, 1949
M.A., Baylor University, 1950
August, 1962

ACKNOWLEDGEMENT

The writer wishes to express his gratitude to Professor James P. Payne, Jr., under whose supervision this thesis was written. A large measure of thanks must also go to Professor F. Ray Marshall for his criticism and encouragement. Mr. Wayne A. Johnston, President of the Illinois Central Railroad, and his entire staff are due thanks for their generous use of their facilities and their day-to-day assistance. The author is also indebted to Mr. Rade Radasinovich for his assistance with the maps and figures and to my wife who checked, arranged and typed the tables--no small task in itself.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ABSTRACT

The nation's railroads have been confronted with persistently declining revenues for some time. In order to regain a level of profit which they consider reasonable they have instituted recently a program of self-remedy designed to reduce costs through the modernization of equipment and service. The expected gains from technological improvements have not been realized generally, primarily because labor costs have remained so high. The railroads feel that this anomaly is the result of certain working rules which are now so unrealistic and so outdated as to be considered "make-work" rules.

It is the primary purpose of this study to determine the actual costs associated with these rules and the effect of these costs on railroad revenue. The major methodology is a case study of a representative railroad, the Illinois Central Railroad, which involves statistical and interviewing techniques as well as personal observations of railroad operations.

Cost data is presented for the period 1951-1960 for five specific areas of working rules which have been alleged to contain "make-work" characteristics. These are: (1) the dual (hours and miles) method of compensation, (2) the "consist" or make-up of crews, (3) the payment of "arbitraries" or special allowances, (4) the use of graduated rate scales according to weight on locomotive drivers or number of cars hauled, and (5) monthly wage guarantees.

By substituting the present average speeds of freight and passenger trains for the contract speeds established shortly after World War I, a savings of nearly five million dollars per year is indicated. If the "consist" of crews were revised to exclude firemen on freight diesel locomotives and one brakeman on all trains, compensation for road crews would be reduced further by slightly over five and one-half million dollars per year. Elimination of the payments for "arbitraries," for graduated weight and car-length scales, and for monthly guarantees would reduce further the wage bill by somewhat over one million dollars annually. Thus, the total annual expense attributed to these rules is found to be slightly over eleven and one-half million dollars per year.

When projected to all Class I railroads, the total excess expense amounts to approximately 460 million dollars annually. Assuming the railroads were successful in eliminating this expense, the result would be an increase in net railway operating revenue of nearly forty-five per cent.

Elimination or modification of these rules depends, however, upon satisfactory answers to two important questions. The first inquires into the validity of the "make-work" charges themselves. The analysis reveals that, while the dual basis system of compensation and the system of special allowances is badly outdated and unnecessarily complex, they do not contain significant make-work characteristics. It is recommended that immediate steps be taken to overhaul the entire compensation structure, but it is recognized that wage scales will need to be revised upward at the same time.

Firemen on diesel locomotives and, to a lesser extent, some brakemen logically may be removed since it is concluded that they perform no necessary function. Transitional or terminal assistance is indicated for these employees, however, and this will tend to offset much of the savings which

theoretically would accrue to the railroads from their dismissal.

In general, it is concluded that, while an essential starting place for curative action lies in a thorough revision of the compensation structure and in a more efficient use of railroad labor, all of the savings indicated in the case study would not be forthcoming because of revisions in wage rates and terminal pay for eliminated crewmen.

CHAPTER I

INTRODUCTION

There has been an increasing trend in recent years to label transportation a "sick" industry.[1] Although considerable difficulty has been encountered by the entire industry, it would appear that what is usually meant by "transportation" is, more precisely, the railroad industry. Investigations have concerned themselves most commonly with the possible inadequacies of the railroads in performing their normal and expected economic functions. In a growing and increasingly diverse economy, a soundly financed and efficiently operated transportation system is possibly of greater import now than ever before. There is also the

---

[1]The language used to express this analogy to human illness is sometimes quite colorful; for example: "The patient is sick. His pulse is slow. His frame is emaciated. His complexion is pallid. He is at death's door." Statement of George Alpert, Chairman of the Board, the New Haven Railroad in hearings before the Subcommittee on Surface Transportation, U. S. Senate, Problems of the Railroads, 86th Cong., 2nd. Sess. (Washington: Government Printing Office, 1957), Part I. (Author's note: The statement was prophetic. In 1961 the New Haven Railroad underwent bankruptcy proceedings.)

frequently expressed view that a strained peacetime system may collapse completely under the stress of war.[2]

Government ownership and operation of the nation's railroads has often been suggested as being the simplest and most direct answer to the railroads' problems. While nationalization of transportation is common among western nations, this solution has been generally regarded as acceptable only as a last resort in this country. The traditional opinion is that inasmuch as the problems are basically economic in character the approach to them should be economic rather than political.

What, then, are the economics of the railroads' problems? Perhaps it should be noted at the outset that there is no unanimity of opinion regarding the existence of a problem at all. If the railroads have resorted to "Madison Avenue" to put their plight before the public, the Railroad Brotherhoods have been little less diligent in

---

[2]An article by Professor Robert W. Harbeson ("Transportation: Achilles Heel of National Security," June 1959 issue of the Political Science Quarterly) based on this conviction was placed in the Congressional Record, 86th Cong., 1st. Sess., by Senator Andrew F. Schoeppel.

their efforts to diminish the existence of such problems.[3] While railroad labor's views are understandable in the light of the theory of collective bargaining, their conclusions are less comprehensible on examination of statistical evidence. This evidence, which is presented in the following chapter, indicates quite clearly that the railroad industry has been in a general state of financial decline for some time. The causes of the deteriorating situation are manifold and extremely complex in nature.

It is self-evident that the basis of the railroads' problems is to be found in the consistently declining

---

[3]George M. Harrison, Grand President of the Brotherhood of Railway Clerks has stated in an address at the Rally of Railway Labor in Chicago, November 5, 1959, "I wonder at the motives behind this high-powered advertising campaign, designed for the railroads on Madison Avenue, New York City, to brainwash the American people . . . Based on the volume of business it is doing, the railroad industry is having the greatest period of prosperity it has ever enjoyed . . ."

And again, in an address by G. E. Leighty, Chairman, Railway Labor Executives' Association before the Operating Railroad Brotherhoods' Education Institute at the New York State School of Industrial and Labor Relations, Cornell U., Ithaca, New York, September 21, 1960, it was stated, "The facts about railroad earnings are quite different. The truth is that the railroads today are not only basically sound but they are now enjoying, despite the new competition from airlines and highway carriers, the most prosperous period in their history."

revenues which they are able to obtain. This is, of course, predominantly due to their loss of traffic to competing modes of transportation, primarily the loss to the motor carriers. Financial distress, however, might still be avoided, at least in the view of the carriers, if the railroads were able to (a) establish competitive pricing based upon realistic cost relationships, and (b) take full advantage of the cost-saving techniques provided by the technological advances in the industry. It has been the allegation of the carriers that they have generally been unable to utilize either remedy.[4] In the first instance the carriers feel that the Interstate Commerce Commission has been either reluctant to or unable to adjust their rate-making devices to the rapidly changing transportation situation.[5] In the

---

[4]Association of American Railroads, Magna Carta for Transportation (Washington: Association of American Railroads, 1961).

[5]Ibid., p. 23. A typical statement made by the Association: "It has become increasingly apparent to objective observers that the massive regulatory growth which enmeshes the railroads is not only outmoded in many respects but also threatens their ability to survive in a highly competitive environment."

latter case the railroads stress their inability to fully implement technological cost savings in the area of labor costs which represents slightly over half of their total costs. The failure is due, so they maintain, to outmoded working rules which they find themselves powerless to correct through ordinary collective bargaining.[6] It is to this latter case which the attention of this study has been directed. Interagency competition and its associated problems of rate-making will be referred to in the following pages only as they would appear to relate to the current revenue problems of the railroads.

The modern concept of railroad working rules have ordinarily been traced back to General Order 27 issued by the Director-General of the railroads in 1918. This followed a study made by the Lane Commission while the railroads were still being operated by the federal government.

---

[6]James R. Sullivan, et al., "Why Railroad Featherbeds Must Go!," Railway Digest, XIV, No. 4 (April, 1959), 3. A typical comment: "While cutbacks and across-the-board reductions have been made in nearly every area of expenditure, until this year virtually nothing could be done about the archaic and sacrosanct union rules which annually sluice down the drain hard-earned railroad dollars by the hundred of millions."

It has been the contention of the railroads that there have been no important changes in these rules from that day to the present.[7] However, it has been only in the last few years that these rules governing wages and general working conditions have been increasingly referred to as "make-work" rules or, more commonly, as "featherbedding." It seems probable that the derogative reference has arisen largely as a result of the completion of dieselization and other technical achievements which have tended to render the old rules obsolete.

"Make-work" rules have not been clearly defined but they appear to refer to rules which require payment for work not actually performed or for unnecessary work. On the railroads the carriers have usually referred to rules which have retained the World War I speed bases and to certain crew make-up rules. Chapter III refers to these rules in detail.

---

[7]Association of American Railroads, Facts About Featherbedding in the Railroad Industry (Washington: Association of American Railroads, 1960), pp. 5-6. In support of their contention the Association refers to the Report of the Emergency Board 109, 1955, quoting as follows: "The fact that the railroad wage rate structure, for operating classifications, has received no comprehensive review for more than 30 years, and no systematic study for almost twenty years alone suggests that it may well be obsolete and ill designed for a modern railroad system."

It should be emphasized at this point, however, that the terms "make-work rules" and "working rules" are not synonomous. Working rules only become "make-work" rules when they no longer approximate the general working conditions which they purport to adjudicate.

The question must then arise: Why do labor unions permit or even insist that working rules degenerate into "make-work" rules? The answer is unusually complex and cannot be adequately treated here but it seems reasonable to assume that the underlying cause is as described by Professor Slichter when he stated that "the efforts of unions to 'make-work' by various methods, direct and indirect, may be attributed primarily to the insecurity of employment in modern industry."[8] The effects of automation and other technological advances on total employment are complex enough to deserve special attention elsewhere but it may be noted that they may have been most keenly felt in the railroad industry. This study is concerned not so much with causation as with effect but it is freely acknowledged that the railroad industry will go far toward a permanent

---

[8]Sumner H. Slichter, Union Policies and Industrial Management, (Washington: The Brookings Institution, 1941), p. 164.

solution of its "make-work" problems when greater insight is developed into the causes of and the solutions for "employment insecurity." The immediate question which this study seeks to answer is: Would the removal of such rules or the reasonable modification thereof result in the railroads regaining financial soundness?

Daniel P. Loomis, President of the Association of American Railroads, the railroads' chief source of public comment, stated in February, 1959, "These outmoded rules now constitute an immediate drain on the industry in excess of $500 million annually . . ."[9] This statement and the massive attack concentrated on "make-work" rules by the carriers suggests the significance which they place on the rules. This may be at least partially explained by the similarity of the quoted 500 million dollar figure and the total Net Railway Operating Income for all Class I railroads in the United States for the year 1960.[10]

---

[9]Daniel P. Loomis, Year of Decision: Clear Track or Crisis? (Washington: Association of American Railroads, 1959), p. 6.

[10]See Table I, p. 15 infra. This is not, of course, meant to suggest that "expense" and "income" are the same thing but the relationship to the study is important.

Further evidence is furnished by the carriers' long and finally successful attempt to secure a thorough study of "make-work" rules by a Presidential Commission. Such a commission was created by an Executive Order of President Eisenhower on November 1, 1960. Some of the results of the Commission's findings will be analyzed in the final chapters. It should be kept in mind, however, that the Commission consisted of members of rail management and the Rail Brotherhoods with the public members in the position of having to sift through testimony which was frequently contradictory.[11] This is not intended to impugn the validity of such findings but suggests that it would be naive to assume that further independent research on this problem is no longer necessary.

Seemingly, there are at least two questions regarding the railroads' allegations as to the cost of "make-work" rules which go to the heart of the problem. The first is

---

[11]For example, in testifying as to the "per cent of trips on which (engine room) alarms occurred," railroad statistics reported 16.1 per cent while the Brotherhood of Locomotive Firemen and Enginemen survey indicated 46.6 per cent. Source: News Letter from the 5 Rail Operating Brotherhoods (Cleveland: July 21, 1961).

concerned with the validity of the 500 million dollar cost figure. This figure has been cited frequently by the Association in public releases the past three years and generally challenged by the Brotherhoods as misleading and inaccurate. In a more objective sense, one student of railroad working rules has observed that, "it is not possible for an outsider to verify the figure of $500 million from available statistics."[12]

The second question is concerned with whether or not these "excess" labor costs have resulted in average daily or annual incomes of rail workers which are significantly greater than that of workers in allied industries. If they are not, then it seems reasonable to assume that these "make-work" rules have been utilized by the Brotherhoods as substitutes for demands for general wage increases. If this should be the case, removal or modification of these rules will not result in financial remedy for the railroads as has been implied.

---

[12]Morris A. Horowitz, Manpower Utilization in the Railroad Industry (Boston: Northeastern University Bureau of Business and Economic Research, 1960), p. 55.

While it is certainly true that the 500 million dollar figure could only be completely verified by a cost survey involving all of the nation's railroads (the magnitude of which precludes any such survey being made), it is the central purpose of this study to provide the bases for such verification by a cost study of a typical Class I railroad, the Illinois Central Railroad. The railroad was selected only after research revealed that it was truly representative. Evidence of this is detailed in succeeding chapters. It is believed that valid projections have been attained from this study which will go far toward ascertaining the true effects of "make-work" rules on railroad revenue. This study has proceeded on the assumption that until more reliable evidence could be secured regarding these financial effects, a haze of doubt must necessarily obscure the question of the efficacy of any program which seeks to solve the railroads' financial difficulties through drastic modification of current working rules.

The answer to the second question framed must lie more in the realm of conjecture since there is no objective method available to determine to what extent general wage demands would be utilized in the absence of favorable

working rules. Nevertheless, it seems almost certain that the rail unions would take stern measures to protect their level of income. Therefore, it seems both appropriate and necessary that the question become a subject of this study.

SUMMARY

A soundly financed and efficiently operated transportation system is essential to productivity, progress and the national defense. The railroads continue to constitute the major element in that system. Confronted by persistently declining revenues the railroads have long sought relief through legislative and Commission action. A recent series of rate increases has proved to be of only partial assistance. With an increasing sense of urgency the railroads have relied more and more, particularly since World War II, on a program of self-remedy through modernization of equipment and service designed to reduce costs and regain what they consider to be a reasonable level of profits.

In addition to loss of traffic through interagency competition and changes in the character of their demand schedule, costs have tended to remain high, particularly labor costs. The blame, the railroads feel, can be laid

squarely at the door of outmoded working rules which they allege are now so unrealistic as to be considered "make-work" rules. The railroads have charged that such rules have resulted in a half-billion dollars loss each year. This figure has not been verified by any outside source and will continue to be challenged until some effort is made to ascertain the true cost of such rules. An equally important consideration is the question of whether or not these rules have been utilized by the rail unions to maintain desirable worker income levels in lieu of wage increases.

An attempt will be made in the following chapters to analyze objectively the actual cost of these so-called "make-work" rules through a study of a typical Class I Railroad. On the basis of an analysis of the Presidential Commission's recommendations and personal interviews with both management and members of the organizations, the concluding chapter will review the pragmatic implications of possible rule changes.

CHAPTER II

THE PROBLEM OF RAILROAD REVENUE

If the capital acquisition position of a business is directly related to profit then, surely, revenue must also be the key to profit itself. A consistently growing revenue is no less the lifeblood of the railroad than it is of any other industry. Conversely, a consistently declining revenue position renders a prognosis which may well be ominous.

The General Nature of the Problem

It is clear from a review of Table I that the dollar volume of revenue for all Class I[1] railroads in the United States has generally declined. Total operating revenues for 1960 amounted to $9,514,066 as compared with an average for the past decade of $10,105,895,191, a decrease

---

[1]Effective January 1, 1956, the Interstate Commerce Commission revised the classification for Class I railroads to include carriers having annual operating revenues of $3 million or more. Prior to that time it was $1 million.

TABLE 1

OPERATING REVENUES[a]

1951-1960

Class I Railways of the United States

(Thousand Dollars)

Item	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960
Total Operating Revenue	$10 390 611	$10 580 762	$10 664 169	$9 370 825	$10 106 330	$10 551 [illegible]	$10 491 340	$9 564 568	$9 825 080	$9 514 234
Freight Revenue	8 634 [illegible]	8 788 635	8 850 522	7 797 885	8 538 286	8 951 423	8 926 511	8 [illegible] 826	8 312 181	8 025 423
Passenger Revenue	300 [illegible]	306 [illegible]	341 962	767 283	742 945	756 582	735 339	675 246	651 168	640 268
All Other Revenue	856 269	885 942	871 685	805 657	825 099	842 [illegible]	827 540	818 446	861 711	848 603
Total Operating Expenses	9 448 069	9 502 542	9 554 769	8 496 807	8 978 333	9 482 [illegible]	9 569 056	8 [illegible] 272	9 077 384	8 930 278
Net Railway Operating Income	$ 942 542	$ 1 078 220	$ 1 109 400	$ 874 018	$ 1 127 997	$ 1 066 [illegible]	$ 922 334	$ [illegible] 296	$ 747 696	$ 584 016

[a]Transport Statistics in the United States, Years 1950-1960, Annual Reports of the Interstate Commerce Commission (Washington: Interstate Commerce Commission).

of well over a half-billion dollars from the average. This is even more discouraging in the face of the fact that the year 1959 had indicated an approximately quarter-billion dollar gain over the previous low-point for the past five years of the decade in 1958.

Total operating revenues are a crude measure of financial health and, in this instance, reflect only a minor (5.86) per cent decline for 1960 over the ten-year average. Of far more significance, however, is the decrease in net railway operating revenue which reflects the operating income of the railroads after deductions have been made for normal expenses but not for fixed or miscellaneous charges. Table I indicates these changes and the Net Railway Operating Income for the past ten years. Thus, Net Railway Operating Income for 1960 was $584,033,571 as compared to an average for the past decade of $928,670,193, or a 37.12 per cent decline for 1960 from the ten-year average. This more dramatic evidence of the deteriorating revenue position of the railroads is due to expenses remaining about the same or increasing slightly while total operating revenue is declining.

A more detailed analysis of the revenue position of Class I railroads (Table I) reveals that while freight revenue had declined on the average for the decade about 1.38 per cent per year, passenger revenue had decreased about 3.93 per cent per year for the same period. As freight constitutes the bulk of the traffic, however, the absolute value of the decline is much more significant. Mail, express and "other revenue" has generally been more consistent and renders a more optimistic outlook. Figure 1 depicts these secular decreases in graphical form.

Sources of Declining Revenues

Declining revenue in the railroad industry may be traced directly to decreases in freight carloadings and passengers carried since these obviously are the principal sources of revenue. Perhaps not quite so obvious is the relationship between declining revenues and changes in the kind or quality of the traffic over a period of years. The former is to be attributed almost entirely to interagency competition, the latter to more subtle and less easily measured phenomena such as service, speed, or changes in taste. The last will be more fully discussed later.

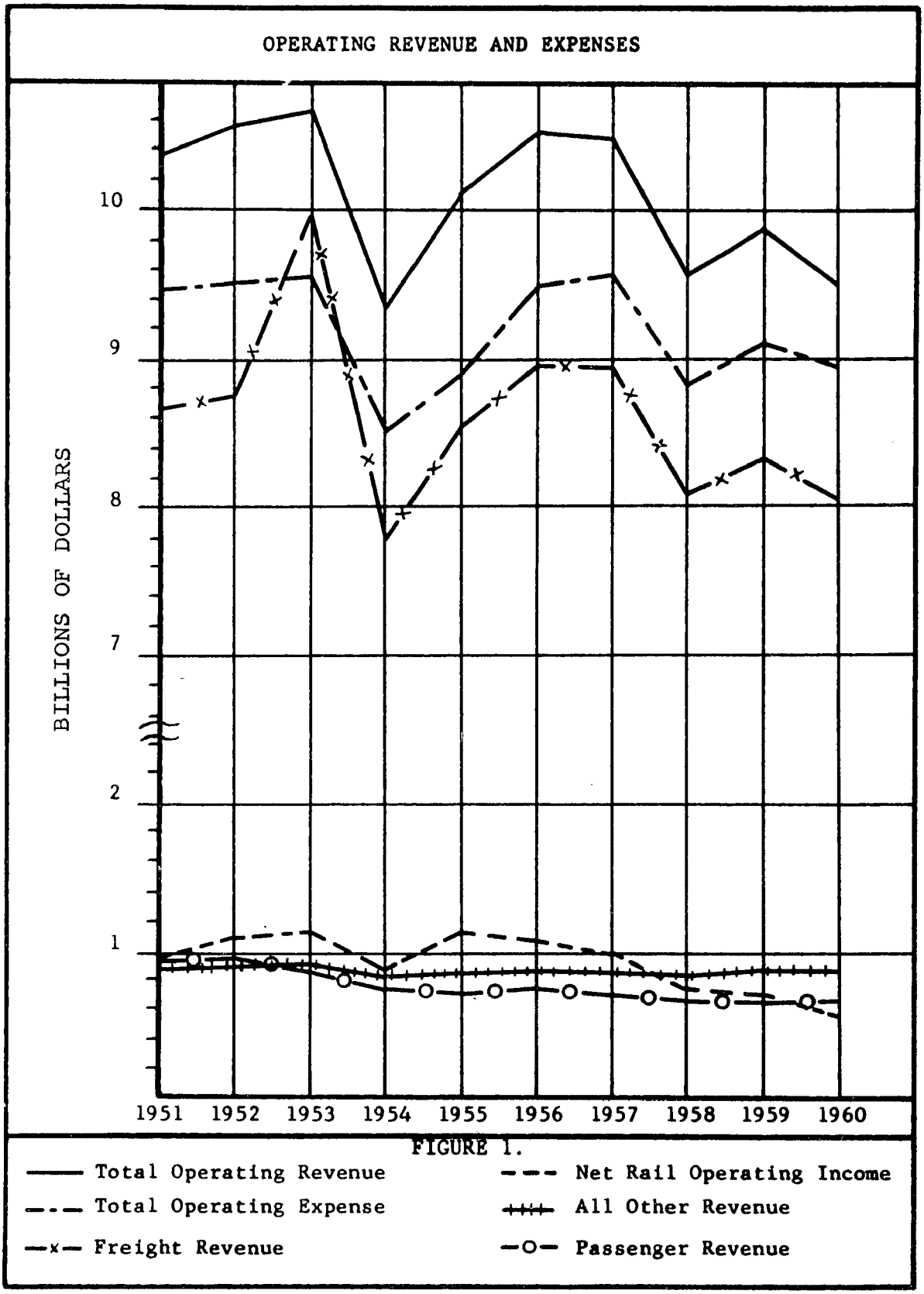
OPERATING REVENUE AND EXPENSES
BILLIONS OF DOLLARS
10
9
8
7
2
1
1951
1952
1953
1954
1955
1956
1957
1958
1959
1960
Total Operating Revenue
Net Rail Operating Income
Total Operating Expense
All Other Revenue
Freight Revenue
Passenger Revenue

FIGURE 1.

Table II reveals, as it might be expected to do, an emerging pattern similar to that found in Table I (Operating Revenues). Carloadings of revenue freight declined rather markedly during the decade under study, but not as precipitously as revenue passenger-miles. Freight carloadings were down in 1960, 13.83 per cent below the average for the ten-year period. This is far in excess of the percentage decline in freight revenue as already noted in Table I. This is probably due to the partial success of the railroads in applying to the Interstate Commerce Commission for freight rate increases during the period.

It has been estimated by the Commission that "the cumulative increases in rates authorized (between June 30, 1946 and September 9, 1958) averaged 119.0 per cent for eastern district, 103.0 per cent for Pocahontas region, 108.3 per cent for southern region, 106.7 per cent for western district and 112.1 per cent for all districts and regions combined."[2] Minor freight rate increases were also

---

[2] Transport Economics (Washington: Bureau of Transport Economics and Statistics, Interstate Commerce Commission, September, 1958), p. 4.

Also see:
Increased Rates, Fares and Charges, 1946, 264

TABLE II

FREIGHT CARLOADINGS AND REVENUE PASSENGER-MILES[a]

Class I Railroads of the United States

(Thousand Passenger-Miles)

Item	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960
CARS OF REVENUE FREIGHT LOADED	40 449 182	37 955 155	36 215 993	33 914 953	37 636 031	37 844 826	35 500 148	30 222 145	31 014 549	30 439 609
Grain and Grain Products	2 587 566	2 565 024	2 453 425	2 554 753	2 633 187	2 704 955	2 674 292	2 874 403	2 724 835	2 784 090
Live stock	496 860	491 686	450 649	447 227	440 962	442 368	343 154	306 819	300 178	259 135
Coal	7 503 179	6 717 250	6 370 667	5 669 695	6 508 296	7 007 085	6 749 454	5 521 838	5 426 356	5 318 209
Coke	837 913	673 112	687 817	421 855	615 872	616 366	575 043	343 269	410 949	402 873
Forest Products	2 363 404	2 270 195	2 253 824	2 084 866	2 275 367	2 316 442	1 994 656	1 853 34.	2 049 436	1 950 202
Ore	3 004 014	2 653 267	3 143 031	2 114 620	2 846 024	2 749 245	2 862 695	1 751 986	1 665 106	2 209 063
Merchandise, L. C. L.	3 866 252	3 690 853	3 496 179	3 185 646	3 224 690	3 055 574	2 750 141	2 328 487	2 112 160	1 809 079
Miscellaneous	19 833 994	18 923 768	19 360 381	17 436 291	19 086 633	18 952 788	17 550 713	15 242 062	16 325 529	15 706 958
REVENUE PASSENGER-MILES	34 613 546	34 009 986	31 655 134	29 286 308	28 525 744	28 184 926	25 884 493	23 268 841	22 047 005	21 257 969
Commutation[b]	4 869 721	4 755 158	4 757 152	4 736 558	4 776 102	4 841 [illegible]	4 300 680	4 775 950	4 549 284	4 197 151
Other than commutation	29 749 578	29 261 204	26 904 794	24 537 019	23 747 177	23 348 447	20 988 507	18 473 647	17 501 737	17 064 257
In coaches	19 524 053	19 757 583	18 954 550	17 686 487	17 307 008	17 073 513	15 803 026	14 224 684	13 703 674	13 421 640
In parlor and sleeping cars	10 225 525	9 503 621	7 950 244	6 850 151	6 440 169	6 274 934	5 185 481	4 249 013	3 798 062	3 642 617

[a]Source. Statistics of Railroads of Class I in the United States, Years 1950-1960, A Report of the Car Service Division (Washington: Association of American Railroads, 1961), pp. 4, 6.

[b]The sum of commutation and other than commutation will not agree with totals, as they are from monthly reports while totals are from annual reports.

proposed by the railroads in 1960 which it was estimated would further increase freight revenues by about 1.7 per cent.[3] The net results of these activities has been to moderate the general decline in freight revenue over the period but the continuous loss of freight traffic has nonetheless rendered the carriers' position a precarious one.

Revenue passenger-miles (Table II) declined 23.72 per cent in 1960 from the average, 1951-1960. Unlike freight carloadings, revenue passenger-miles indicated a decrease each year over the previous year for the period. In spite of an average annual increase of 0.041 cents per passenger-mile revenue over the ten-year period, passenger revenue decreased from $900,238,679 in 1951 to a new low

---

I.C.C. 695, 266 I.C.C. 537
Increased Freight Rates, 1947, 269 I.C.C. 33, 270 I.C.C. 81, 270 I.C.C. 93, 270 I.C.C. 403
Increased Freight Rates, 1948, 272 I.C.C. 695, 276 I.C.C. 9
Increased Freight Rates, 1951, 280 I.C.C. 179, 281 I.C.C. 557, 284 I.C.C. 429
Increased Freight Rates, 1956, 298 I.C.C. 279
Increased Freight Rates, Eastern and Western Territories, 1956, 299 I.C.C. 429 and 299 I.C.C. 557

[3]Association of American Railroads, A Review of Railroad Operations in 1960, Special Series No. 95 (Washington: Association of American Railroads, 1961), p. 13

of $640,268,064 (Table I) in 1960 indicating a more rapid decline in revenue passenger-miles than could be offset by periodic fare increases. One authority has suggested that "competitive conditions in recent years have so limited the passenger fares that can be charged that it is generally considered impossible to eliminate the passenger deficit by raising fares."[4]

A Commission study for the year 1959 illustrates this situation. Three railroads of thirty-seven studied for that year reported passenger deficits in excess of freight net railway operating income; twelve reported deficits between fifty and one hundred per cent of freight net railway operating income and sixteen reported passenger deficits up to fifty per cent of the net railway operating income from freight service. Three railroads reported profits for passenger service.[5] It has been frequently pointed out, however, that these deficits are due in part to the formula prescribed

---

[4]D. Phillip Locklin, Economics of Transportation, 5th Ed. (Homewood, Ill.: Richard D. Irwin, 1960), p. 342

[5]Transport Economics, op. cit., May, 1960, pp. 2,3

by the Commission for computing costs for passenger service.[6] It has been suggested that such costing methods include joint or common costs which in many instances would be incurred by the roads even if the service were abandoned.[7] Although there has been little consistency in defining precisely what is meant by "compensatory" this is the term frequently used by the Commission to suggest costing procedures which result in rates which cover all costs including some return on net investment.[8] Aside from these very complex and sometimes very abstract considerations regarding accounting methods it seems clear that passenger traffic has generally been unprofitable and may be placing an undue burden on freight revenues.

---

[6]A comprehensive account of the formula may be found in a report entitled, Avoidable Costs of Passenger Train Service (Cambridge: Research Committee of the Aeronautical Research Foundation, 1957). Also see: Meyers, et al., Competition in the Transportation Industry (Cambridge: Harvard U. Press, 1959)

[7]An excellent discussion of the problem may be found in G. W. Wilson, "Current Criticism of the ICC," Current Economic Comments, XXI (August, 1959).

[8]For a critical analysis, see: Ernest W. Williams, Jr., The Regulation of Rail-Motor Rate Competition (New York: Harper, 1958), Chapter III

Long-Run Implications of Declining Revenue

The problem of most pressing importance to the railroads resulting from declining revenues is the disturbing influence which it exerts upon working capital. Working capital represents the cash available for current operating expenses. Table III depicts the steady and serious decrease for the last half of the decade previously examined. The working capital (less material and supplies) on December 31, 1960 was $560,700,000 only 82.13 per cent of the average for that date for the five years studied. This was considerably less than the $703,294,000 total railway operating expense for the following month of January, 1961. Thus, working capital, excluding any prorated share of material and supplies, failed by over one hundred million dollars to meet the following month's necessary outlay of cash. It has been stated that this situation tends to force distorted economic decisions on the railroads which may have far-reaching results.[9]

---

[9]The President of the Pennsylvania Railroad emphasized this fact in testimony before the Senate Subcommittee on Problems of the Railroads, 1957, op. cit., p. 127, stating that the long-run effects of inadequate working capital, including: (a) liquidation of assets, (b) elimination of

TABLE III

WORKING CAPITAL - CURRENT ASSETS AND LIABILITIES*

Class I Railroads of the United States

(As of December 31)

(Thousands of Dollars)

Item	1956	1957	1958	1959	1960
Current assets--Total	$3,542 427	$3 180 872	$3 110 996	$3 159 856	$2 908 842
Cash	846 875	716 453	615 509	550 705	483 613
Temporary cash investments	968 210	829 321	985 990	1 102 660	952 697
Materials and supplies	714 020	711 947	582 798	558 260	551 774
All other	983 322	923 151	926 699	948 231	920 758
Current liabilities--Total	2 095 956	1 913 650	1 721 985	1 812 674	1 796 368
Accounts payable	1 154 389	1 089 547	950 531	1 004 652	1 050 198
Taxes accrued	640 625	544 308	472 448	510 921	443 849
All other	300 942	279 795	299 006	297 101	302 321
Working capital--Net	1 436 471	1 267 222	1 389 011	1 347 182	1 112 474
Per cent increase over previous period	d. 10.4	d. 11.8	15.3	d. 3.0	d. 17.4
NET WORKING CAPITAL (less material and supplies)	$ 702 451	$ 555 275	$ 806 213	$ 788 922	$ 560 700
Per cent increase over previous period	d. 25.1	d. 21.0	63.6	d. 2.1	d. 28.9

*Source: Transport Economics, Monthly Report of the Bureau of Transport Economics, (Washington: Interstate Commerce Commission, January, 1957-61).

d. Decrease

In the minds of some, the most significant aspect of declining revenue lies in the effect it may have upon the individual company's ability to raise capital for technological improvements which are so necessary to meet the increasing threat of interagency competition. The usual methods of attracting capital are available to the railroads, but they have historically relied more heavily on the sale of debt than most industries. One of the significant results of this policy is the fact that in recent years maturities on equipment obligations alone have averaged nearly a half-billion dollars annually. For this and other reasons the railroads have followed the recent trend of American business in utilizing retained earnings for capital investment.[10]

---

necessary capital expenditure for efficient operation, and (c) deferred maintenance constituted, "the most costly thing that can happen for the long-run pull, particularly in an inflationary economy . . ."

[10]Daniel H. Brill, "Financing of Capital Formation," a report prepared by the National Bureau of Economic Research entitled, Problems of Capital Formation (Princeton: Princeton University Press, 1957), pp. 147-192

It seems to be axiomatic that capital acquisition goes hand-in-hand with the ability to retire bonds as they mature, pay interest on existing indebtedness, pay dividends on outstanding ownership and provide net revenues for internal financing. The measurement of this ability is return on investment after depreciation. Table IV indicates the general decline in this important measurement of financial health. It may be noted from the next to last column that dividends have generally held more firm for the ten-year period under study than would normally be anticipated. However, the difficulty confronting rail management may be noted from the last column which depicts the percentage of net income used annually for the payment of cash dividends. Increasingly, less and less is left for retained earnings. One of the most careful observers of railroad problems has noted:

> Large annual sums of retained net income are clearly essential if railroads are to continue high rates of gross capital expenditures in future years. For equipment obligation maturities will continue high, and the sale of stocks or bonds other than equipment obligations may not be feasible. Consequently the rates of return earned by the railroads will have great significance to shippers and travelers

TABLE IV

RETURN ON NET INVESTMENT AND CASH DIVIDENDS PAID - 1951-1960[a]

Class I Railroads of the United States

Year	Per cent Return on Net Investment	Net Income (Thousand Dollars)	Total Cash Dividends Declared	Per cent of Dividends to Net Income
1951	3.76	$693 176	$328 478	47.30
1952	4.16	825 396	338 065	40.95
1953	4.19	903 227	382 282	42.32
1954	3.28	681 690	374 344	54.91
1955	4.22	927 122	447 434	48.26
1956	3.95	876 333	431 562	49.24
1957	3.36	737 431	426 515	57.83
1958	2.76	601 737	372 482	61.73
1959	2.72	577 719	403 238	69.79
1960[b]	2.13	444 657	n.a.	n.a.

[a]Association of American Railroads, Railroad Transportation; a Statistical Record, 1921-1959 (Washington: Association of American Railroads, 1960), p. 16.

[b]Association of American Railroads, A Review of Railroad Operations in 1960 (Washington: Association of American Railroads, 1961), Special Series No. 95, p. 13.

as well as to rail stockholders.[11]

Causes of the Deteriorating Situation

Some insight may be gained into the problems which this study contemplates by a brief review of the derivation of the current financial plight of the railroads. Technological advances have proved to be a two-edged sword for the railroads. On the one hand they created a rail service which is safer and infinitely more efficient. On the other hand it has created competitive forms of transportation dangerous to its own existence. The two might offset each other if it were not for the fact that the rate of diminishing average unit costs on the railroads have not kept pace with their loss of traffic. Thus, profits have declined gradually but persistently since the advent of competing forms of transportation.

The railroads believe that this situation has developed as a result of labor costs increasing while total

---

[11]James C. Nelson, Railroad Transportation and Public Policy (Washington: The Brookings Institution, 1959), p. 221. For a scholarly and somewhat detailed discussion of rail earnings and capital formation, see: Chapter 7.

employment was significantly decreasing. The following chapters will attempt a close analysis of this problem. A brief historical survey of interagency competition may reveal, however, why this problem has become so critical. It should be noted at this point that the entire analysis thus far has only general validity. Some regions fare better than others; some individual railroads, particularly in the Pocahontas region, have consistently maintained high levels of profit. Reference throughout this study, however, will continue to be to the railroads as an industry.

Loss of revenue from interagency competition. The railroads' problems may have begun as early as a half-century ago when their near-monopoly position in the nation's transportation system was challenged by new methods of carriage, particularly by highway motor carriers. One of the closest students of transportation problems has observed that, "the most pervasive and deep penetration into traffic provinces once held by the railroads has been made by the motor carriers."[12] By 1920 the adaptability of the motor

---

[12]Williams, op. cit., p. 1.

carrier to intercity traffic was becoming quite clear. Ease of entry, faster service and the use of publicly constructed and maintained ways resulted in the growth of the motor carrier industry which was unhindered by government regulation until 1935.[13] Attempts at integrated rate regulation since that time by the Interstate Commerce Commission did little, however, to solve the railroads' basic problem which was the continuously increasing loss of high-rated traffic to the motor carriers. The motor carriers had a service to sell which is the fast, efficient transportation of highly-rated merchandise, and they continued to sell it in increasing quantities. Their success in handling top-graded traffic is clear from a study of Table V which illustrates the cents per ton-mile revenue of common carriers versus that of Class I railroads for the period, 1950-1959. Since 1954 the railroads have consistently received less than one-fourth of the cents per ton-mile revenue of that of the Class I Common intercity motor carriers.

---

[13]One of the clearest, brief accounts of this growth and the need for regulation, and an explanation of the Motor Carrier Act of 1935, may be found in Locklin, op. cit., Chapter 31.

TABLE V

TON-MILE REVENUE OF CLASS I COMMON MOTOR CARRIERS AND CLASS I RAILROADS, 1950-1959[a]

(¢/ton-mile)

Year	Class I Common Motor Carriers	All Class I Railroads	Rails as Percent of Motor
1950	5.009	1.329	26.8
1951	5.174	1.336	26.2
1952	5.615	1.430	26.0
1953	5.732	1.478	26.1
1954	5.826	1.420	24.7
1955	5.798	1.370	24.0
1956	5.968	1.384	23.5
1957[b]	6.135	1.445	23.6
1958[c]	6.186	1.463	23.9
1959[c]	6.277	1.445	23.4

[a]Source: Transport Economics, Monthly Report of the Bureau of Transport Economics, (Washington: Interstate Commerce Commission, February, 1961), p. 11.

[b]Class I classification changed in 1957 from Motor Carrier revenue of $200,000 to $1,000,000 annually.

[c]Preliminary figures.

Such figures reflect not only the loss in total freight traffic by the railroads over the period under study but the additional loss to revenue by the gradual change in the class or kind of freight traffic. This change is most clearly noted from a review of revenue freight cars loaded of Miscellaneous from 1951-1960 (Table II). The carloadings in this important category decreased from 19,839,994 in 1951 to 15,706,958 in 1960, a decline of 21.94 per cent. Nelson has observed that "because those commodities generally take rates that are high in relation to rail unit costs, volume diversion of manufactures and miscellaneous goods has had a seriously adverse effect on railroad earnings."[14]

One of the gravest concerns of rail officials, however, in the past decade has been the encroachment by the motor carriers into those areas of transportation long thought to be the exclusive domain of the rails. This is the bulk, low-rated, long-distance traffic which would normally be considered to be more efficiently transported over rails. The diversion of this kind of traffic to the motor carriers has even more long-run implications to the

---

[14]Nelson, op. cit., p. 34.

rail carriers than the loss of the highly-rated manufacturing and miscellaneous commodities mentioned above.

The key to this problem lies in the rate regulatory powers of the Interstate Commerce Commission. The railroads feel that they could recapture and retain this type of traffic if they were permitted to reduce rates in direct relation to costs. The Commission, on the other hand, at present is required by law to preserve all forms of transportation in keeping with the national transportation policy. The problems associated with this seeming paradox are so unusually complex as to require separate and careful study.

The above discussion represents only a very casual approach to the many problems associated with interagency competition and its purpose was to create an awareness of the fact that the subject of this study is only one of the important problem areas which requires careful and immediate attention.

SUMMARY

In summarizing the current revenue position of the nation's railroads it may be fairly stated that the situation is generally very discouraging. Direct causes appear

to be (a) consistently declining freight carloadings and revenue passenger-miles, (b) resulting declines in working capital which tends to create economic decision-making based upon expediency rather than long-run planning, (c) inability to finance capital expansion through retained earnings, and (d) a rate structure which will not permit the carriers to regain traffic lost to competitive modes of transportation. Confronted with this situation the rail carriers have attempted to improve or at least maintain their financial position through improvement in transportation techniques, primarily those concerned with cost reduction.

Having established the current financial environment, the remainder of this study will be concerned with probing the railroads' allegations that outmoded working rules have prevented them from regaining a sound financial structure through cost-cutting efficiencies.

CHAPTER III

ORIGIN AND MEANING OF "MAKE-WORK" RULES

Formal, written working rules have emerged in nearly every industry in response to the need to delineate the responsibilities and obligations of both labor and management. Perhaps the most urgent need from the standpoint of the worker is, as Slichter has suggested, "protection against the arbitrary and uncontrolled discretion of management."[1] Arbitrary action, however, is not limited to management and there is equal need for a set of rules to protect the companies against capricious conduct. Finally, a rational and realistic set of rules encourages greater day-to-day operational efficiency. One authority has argued that management only becomes concerned with working rules "when these rules are obsolete, thereby retarding output and efficiency."[2]

---

[1]Sumner H. Slichter, Union Policies and Industrial Management (Washington: The Brookings Institution, 1941) p. 2.

[2]Jacob J. Kaufman, Collective Bargaining in the Railroad Industry, (New York: King's Crown Press, Columbia U., 1954) p. 27.

Railroad management has in recent years indicated considerable concern with the working rules in their industry. In no other industry can working rules be found which are so complex and so outdated. The problem is further complicated by the fact that there is probably no other industry in which the need for a thorough revision is so urgent. The latter is due, of course, to the persistently declining financial health of the railroad industry. On the other hand there is no other industry in which labor is confronted with the decline in the working force to the extent in which it is to be found in the railroad industry. This decline may be noted from Table VI which indicates a decrease of nearly one-half million employees in the decade 1951-60, alone. Changes in technology form the underlying causes for the decline but the result is a conflict situation in which on the one hand rail management is keenly desirous of revising the working rules to correspond more closely with present day technology while, on the other hand, the rail labor organizations are willing to modify the rules only if the result will maintain present employment.

TABLE VI

EMPLOYEES AND THEIR COMPENSATION*

Railroads of Class I in the United States

Calender Years 1951 to 1960

Year	Number of Employees	Per cent Decrease Over Previous Period	Average Weekly Compensation	Per cent Increase Over Previous Period
1951	1 276 000	--	$ 80.20	--
1952	1 226 663	4.0	83.23	3.6
1953	1 206 312	1.7	84.68	1.7
1954	1 064 705	13.3	87.45	3.2
1955	1 058 216	.6	90.50	3.4
1956	1 042 664	1.5	97.67	7.3
1957	986 001	5.7	104.22	6.3
1958	840 575	17.3	112.48	7.3
1959	815 474	3.1	117.27	4.1
1960	780 494	4.5	119.91	2.2
Average Annual Change Over Decade		5.2		3.9
Total Change 1960 Over 1951		38.8		49.5

*Source: Association of American Railroads, Statistics of Railroads of Class I in the United States, 1950-1960 (Washington: Association of American Railroads, August, 1961), p. 3.

The Origin of Railroad Working Rules

Negotiated working rules may be traced back as far as 1875 when an agreement was concluded with the New York Central and its engineers. A fireman agreement was signed by the Illinois Central in the following year. Conductor and trainmen agreements were concluded somewhat later, the first such set of rules dating from 1891.[3] These early agreements were comparatively simple in character and generally concerned themselves only with basis of pay considerations. However, by 1911, the Chicago, Milwaukee and St. Paul concluded an agreement with its engineers which contained forty distinct sections. These more complex agreements covered rules governing employment in addition to those dealing with methods of payment.

An event of unusual significance occurred in 1916 with the passage of the Adamson Eight Hour Act. The act

---

[3]The above has been generally adapted from: William Z. Ripley, "Railway Wage Schedules and Agreements," Report of the Eight-Hour Commission, U. S. House of Representative, 65th Congress, 2nd. Sess. (Washington: Government Printing Office, 1918), pp. 269-271.

stipulated:

> That beginning January first, nineteen hundred and seventeen eight hours shall, in contracts for labor and service, be deemed a day's work and the measure of a standard of a day's work for the purpose of reckoning the compensation for services of all employees who are now or may hereafter be employed by any common carrier by railroad . . .[4]

The act resulted from a demand by the Brotherhoods for an eight-hour day which had been summarily dismissed by the companies. The threat of a nationwide strike then induced President Wilson to ask Congress for the passage of legislation to insure the eight-hour day in the railroads. The carriers immediately challenged the constitutionality of the act but it was upheld by the Supreme Court, most notably in the case of Wilson v. New in which the Court noted that the right to collective bargaining "affords no ground for saying that legislative power does not exist to protect the public interest from injury resulting from a failure to exercise that private right."[5]

A few months later the railroads were seized by the federal government under war-time powers granted to the

---

[4] 39 Statutes at Large, 721 as quoted in Ibid., p. 4.

[5] 243 U.S. 332 (1917).

President and were placed under the direction of W. G. McAdoo, who was named Director General. He then named a commission, frequently referred to as the "Lane Commission" to study wages and working conditions on the railroads. As a result of this study McAdoo issued General Order 27 which, in addition to acknowledging the existence and legality of the eight-hour day, granted increases in wage rate and improvements in working conditions. Subsequently, a number of nationwide agreements were signed with various labor organizations.[6] A careful student of railroad labor legislation has observed that "it was during this period that the railroad labor organizations made considerable progress in securing new rules and broad interpretations of existing rules (and) . . . the precedents established on many railroads were carried over and still exist in a large number of agreements in force today."[7] As already noted, this is an opinion with which the railroads concur today.[8]

---

[6]Wayne L. McNaughton and Joseph Lazar, Industrial Relations and the Government (New York: McGraw-Hill, 1954), p. 105.

[7]Kaufman, op. cit., p. 29.

[8]Facts About Featherbedding in the Railroad Industry, loc. cit.

Following return to private ownership a Railroad Labor Board composed of nine members was created by the Transportation Act of 1920 to adjudicate labor disputes. The Board was not a success largely owing to the failure of Congress to utilize mediation.[9] Dissatisfaction on both sides led to the passage of the Railway Labor Act of 1926. Workers were somewhat more successful in extending the rules in their favor after the passage of this act than they had been in the previous six years under the act of 1920.

A series of amendments to the Railway Labor Act of 1926 were passed by Congress in 1934. One such amendment was to become particularly influential in the codification of working rules into their present day form. This amendment provided for the creation of a National Railroad Adjustment Board which is an "administrative tribunal empowered to render judicially enforceable decisions in controversies arising out of interpretation of collective bargaining agreements between rail carriers on the one hand

---

[9]National Mediation Board, Twenty Years Under the Railway Labor Act, Amended, 1934-1954 (Washington: Government Printing Office, 1955), p. 90.

and the representatives of their employees on the other."[10] The Board consists of four divisions. The first division, which will be of primary concern to this study, has jurisdiction over train and yard service workers such as engineers, firemen, trainmen, conductors, hostlers, and yard service employees. The division consists of ten members and all divisions are headquartered in Chicago. From 1934 through 1957, nearly fifty-thousand cases were docketed,[11] indicating the extent to which the services of the Board have been used. A Referee may be appointed to make an award in the event of the failure of the Board to render a decision.[12]

The carriers have contended for some time that the Board has to all practical purposes, "completely changed the entire meaning and effect of many rules and practices of long standing, and has immeasurably increased the control of the Organizations over railway operations and the featherbedding incident to the application of the Operating Employees Rules."[13] An example of this new meaning

---

[10]National Mediation Board, Administration of the Railway Labor Act by the National Mediation Board, 1934-1957 (Washington: Government Printing Office, 1958), p. 27.

[11]Ibid., p. 28.

[12]Ibid., p. 29.

[13]Transcript of the Proceedings of the Emergency

given to the rules by the Board is that of the fifty cents permitted a crewman when he couples air hoses at points where carmen are employed. The Board evidently has felt that this is a task which is over and above his regularly assigned duties and is a duty regularly assigned to carmen. At points where a carman is not on duty no such payment is made and the task is thus regarded as an emergency proceeding. Numerous such decisions have been rendered by the Boards over the objections of rail management who have generally contended that they remove the discretionary power of work assignments from management.

There have been no important rules modifications since the creation of the Adjustment Boards. Such changes as have occurred since 1934, and there have been many, have been as a result of interpretation of existing legislation rather than any notable change in the wording of the legislation itself.

The preceding discussion has briefly indicated the origin and legislative development of railroad working rules

---

Board, Chicago, Illinois, 1946, p. 82, as quoted by: Kaufman, op. cit., p. 30.

but leaves unexplained exactly what working rules are and how they are intended to function. The attempt to delineate all rules and wage schedules would be a next to impossible task, however, since some agreements covering only one classification exceed two hundred pages in length. Such an effort would also appear to be of doubtful merit in connection with this study. Thus, the following is an attempt to classify and explain only those rules which are the subject of the present controversy.[14]

The Meaning of "Make-Work" Rules

The rules which have most frequently given rise to the charge of "featherbedding" may be grouped into the following: (a) the dual basis of payment (hours worked and/or miles run), (b) payment of arbitraries or constructive allowances, (c) rates based on graduated scales (weight on drivers or number of cars), (d) monthly wage guarantees,

---

[14]The complexity of these agreements was noted as early as 1918 by one authority who observed: "No one . . . can fully appreciate the amazing intricacy of these contracts. Every word, often every comma, means something. Few clauses stand by themselves alone. They interlock with and are affected by all sorts of operating practices or rules dependent thereon." Ripley, op. cit., p. 269.

and (e) rules pertaining to crews and work assignments including the use of firemen on diesel locomotives. Each will be analyzed in terms of the amounts of alleged "excess expense" incurred as a result of the rules.

The dual system of payment. While it cannot be said that the railroads' method of compensating its employees is entirely unique it is, nevertheless, a system peculiar to and reflecting the specialized nature of railroading. It should be noted, however, that the specialized operations which give rise to the peculiar system of wage payments is confined to a relatively small proportion of the total number of employees. Reference is made to those employees said to be engaged in "road service." Yard, clerical and other groups are reimbursed for their labor on essentially the same basis as employees in other industries; specifically, at an hourly rate with a standard eight-hour day and premium rates for over-time. In the year 1960, for example, only slightly more than 100,000 out of a total of nearly 800,000 employees were subject to the dual payment

system.[15]

The basis of pay for road service employees has long been a perplexing problem to the railroads. Prior to 1900, the most common basis of pay was the monthly wage. However, this method, like the daily wage which superseded it, was unsatisfactory because it failed to take into account the important differences which existed in the service. No two runs or "divisions" were alike in the length of time required to traverse them, in the difficulties encountered or in the skill required to execute the run efficiently. "Trip rates" were then adopted which ostensibly took into consideration the special problems encountered on each trip. This new system continued to be unsatisfactory and mileage plus hours were considered in combination in establishing a "standard day" by the turn of the century. This "standard day" consisted of one hundred miles or ten hours. In 1910 the famous Clark-Morrissey Award not only reaffirmed this basis of compensation but added the "speed basis" method of overtime payment. This concept is somewhat complex in

---

[15]Association of American Railroads, Statistics of Railroads of Class I in the United States, p. 3. The actual count was 101,398 road service employees out of a total of 780,494.

nature and will be discussed later. As already noted, the Adamson Eight-Hour Act of 1916 provided for a standard day of eight hours rather than the ten hour standard prior to that time. With the exception of the awards made by the Adjustment Boards as previously observed, the pattern of wage payment for road service employees in existence today was completed for all railroads by the year 1919.[16]

The dual basis of payment as thus established is divided into three major categories: (a) miles run, (b) hours worked, and (c) overtime payments. At the present time there are two mileage limitations in effect on American railroads. For engineers and firemen (hereinafter referred to as "enginemen"), "100 miles or less" constitutes the basic daily run on both passenger and freight service. For conductors and trainmen (primarily brakemen or flagmen and baggagemen) the basic run is "150 miles or less" for passenger service and "100 miles or less" for freight service.

---

[16]Harry E. Jones, Railroad Wages and Labor Relations, 1900-1952, An Historical Survey and Summary of Results (New York: Bureau of Information of the Eastern Railroads, 1953), Chapter II.

For enginemen, miles in excess of the basic run are paid for at a pro rata rate; for conductors and trainmen, excess mileage is paid for at a rate stipulated in the contract.[17]

The standard day for enginemen on passenger runs is five hours; on freight runs, eight hours. Overtime is computed on the basis of twenty miles per hour for passenger runs and is paid for at one-eighth the daily rate of one hundred miles (see Appendix A for tables of overtime payments based on both miles and hours). The standard day for conductors and trainmen in passenger service is seven and one-half hours with overtime paid for on the minute basis at a prescribed hourly rate.[18] In freight service the

---

[17]An example of the wording here is as follows: "On runs of 100 miles or less in passenger, freight, snow plow, mixed train, work, wreck, pusher or helper, or mine run service and trains established for the exclusive purpose of handling milk, 100 miles will be allowed. Miles made in excess of 100 paid pro rata." Article 5 (a), Schedule of Wages of Locomotive Engineers, Illinois Central Railroad, March 1, 1953, pp. 7-8

[18]For conductors and trainmen, a typical agreement on what constitutes a standard day and overtime is as follows: "Conductors on other passenger runs shall be paid overtime on a speed basis of 20 miles per hour computed continuously from the time required to report for duty until released at the end of the run. Overtime shall be computed on the basis of actual overtime worked or held for duty,

standard day for these classifications is eight hours with overtime payment based on a prescribed hourly rate (see Appendix A).

Thus, the dual basis of payment may be said to consist of one hundred miles or less, five hours or less for enginemen in passenger service with overtime commencing after five hours in passenger service and after eight hours in freight service and paid for at one-eighth of the daily rate. For conductors and trainmen, the basis of pay is one hundred and fifty miles or less, seven and one-half hours or less in passenger service and for freight service, one hundred miles or less, eight hours or less with overtime in both cases paid for at a prescribed rate.

The following example may be given as an aid in clarification. The author accompanied a dispatch freight of the Illinois Central System from Chicago to Clinton, Illinois, a distance of 114 miles from the Chicago Division's

---

except that when the minimum day is paid for the service performed, overtime shall not accrue until the expiration of seven (7) hours and 30 minutes from the time of first reporting for duty . . ." Article 3 (b) & (c), Schedule of Wages and Rules for Conductors, Illinois Central Railroad, November 1, 1954, p. 4.

Markham Yards. The schedule called for a trip of four hours and forty minutes. In spite of a "pick-up" at Kankakee, the trip was made in slightly less than the scheduled time. Clinton is a division point and the crew disembarked there, stayed overnight in Clinton and returned to Chicago the following morning (see Appendix B, Dispatch Freight Schedules CS-3 and SC-6). Assuming a daily rate for the engineer of $24.25[19] his pay for the day amounted to $24.25 mileage guarantee plus 24.25¢ per mile for the fourteen additional miles or $3.40 for a total of $27.65.[20] For conductors and trainmen the pay would be computed in exactly the same fashion with the only difference to be found in the calculation of the excess mileage payment.[21] For example, a conductor on the same trip would have received $21.16 for his mileage guarantee and fourteen additional miles at the basic rate of 20.21¢ per mile or an additional $2.83 for a

---

[19]Rate as of March 1, 1961 (based on weight on drivers of 700,000-750,000 pounds).

[20]Additional pay as a result of "breaking in engines for service" or "watching engines" would normally be added to this but this will be discussed under the section dealing with "arbitraries."

[21]Conductors and trainmen are paid excess miles at a prescribed rate rather than at pro rata.

total of $23.99 discounting any arbitraries or constructive allowances. Trainmen would be subject to the same method of computation and, in this instance, none of the crewmen would be eligible for overtime compensation.

If the pay of the traveling engineer who accompanied the author on this trip were to be computed, however, it would be found to be considerably more complex. This engineer reported for duty at eight A.M., was "held for duty" (awaiting departure) for three hours, made the four hour trip to Clinton, was "held away from home terminal" for four hours and returned, it may be assumed, in the capacity of engineer on a passenger train which arrived back at his home terminal at ten P.M.; a total elapsed time of fourteen hours. Assuming the same pay scale as above, he received $27.65 mileage guarantee for the freight run and $21.46 mileage guarantee on the passenger run plus an additional forty-eight miles[22] at 2.46¢ per mile for a total of $31.76 for the passenger run. Because the freight run was made in a total

---

[22]Additional mileage is due to the passenger train terminating at the downtown Chicago station rather than at the Markham Yards.

elapsed time of seven hours (even including the three hours waiting time) no overtime eligibility exists. As he was called for duty immediately upon arriving in Clinton, one might assume overtime is called for on the return trip since overtime commences after five hours in passenger service and there exists in this case a total elapsed time of seven hours. It must be kept in mind, however, that overtime only commences after five hours if the average speed falls below twenty miles per hour. Expressed another way if six hours is required to travel one hundred miles then, and only then, would overtime be paid for one hour. In this case, overtime would commence on the 148 mile trip only after seven hours and twenty-four minutes. His total compensation for the duty period indicated would thus be $59.41.[23]

---

[23]This compensation is calculated only to illustrate the dual basis of payment and does not include the "arbitraries" that would have been paid in addition. These will be calculated under that section.

In order to illustrate overtime on this run it might be assumed that bad trackage held up the freight for a six P.M. arrival in Clinton rather than a three P.M. arrival. Total elapsed time since the traveling engineer was called for duty would be ten hours. Overtime would commence after nine hours and seven minutes (see Appendix A) for this 114 mile run. Overtime is paid for at three-sixteenths of the daily rate on the minute basis. On this basis, fifty-three minutes of overtime would be equivalent to seventeen additional miles (see Appendix A-2) at the pro rata rate or an additional $4.12 (24.25¢/mile x 17 miles).

It may be seen from the above illustrations that payment under the dual basis system may result in quite high total wages being paid in a given twenty-four hour period. The hourly wage for the fourteen total hours is only $4.24 per hour, however, and not generally considered to be excessive. Although the carriers attempt to relate divisional runs to mileage rules when it is consistent to do so, it has been said that there are numerous examples of runs which are much less than one hundred miles in length

and which are completed in far less than eight hours.[24] The length of runs and their relationship to working rules will be discussed in detail in a following chapter.

Consist of road crews. Perhaps the area of most violent controversy in the general problem of "make-work" is that dealing with crews and work assignments (on the railroads the make-up of a train crew is referred to as its "consist"). This is undoubtedly true because the consist question poses a direct threat to employment itself. It also is that phase of featherbedding which is most commonly referred to by the general public.

Rules dealing with work assignments become "make-work rules" when they require employers to maintain employees on non-existing jobs or require workers to perform unnecessary tasks. According to the carriers, any rule which "preempts management's right to determine when, if, and how many trainmen shall be used on particular trains"

---

[24]Engineers' 30% Wage Case, 1954, Carriers Exhibit No. 38, "Train Studies," as quoted by Morris A. Horowitz, "Wage Guarantees of Road Service Employees of American Railroads," The American Economic Review, XLV (December, 1955), 854.

may be considered "make work rules."[25] In addition, sixteen states have "full-crew" laws and another seven have laws which permit the regulation of the size of crews by state regulatory commissions.[26]

The most obvious illustration of the crew consist problem is that of the fireman on the diesel locomotive. Prior to 1930, there was abundant need for firemen on the steam locomotive. With the gradual advent of the diesel locomotive in the early thirties, however, the fireman was generally eliminated with the exception of passenger firemen on some lines. By 1937, dieselization had become common enough (although hardly in the majority) to reach the attention of the Brotherhood of Locomotive Firemen and Enginemen. Subsequent national negotiations provided for firemen on through passenger trains and on all other service where the weight on drivers was over 90,000 pounds which meant virtually all locomotives. After World War II, an Emergency

---

[25]Association of American Railroads, Facts About Featherbedding in the Railway Industry, p. 22.

[26]Jules Backman, "The Size of Crews," Labor Law Journal, XII (September, 1961), 805-806.

Board ruling emphatically denied Brotherhood demands for an additional fireman on multiple power unit trains. With dieselization nearly complete, the carriers in 1956 attempted to negotiate the use of firemen at company discretion. Other considerations, however, resulted in a three-year moratorium on work rule negotiations. In the meantime the most significant event in the history of the firemen question occurred in Canada as the result of a Royal Commission study commonly referred to as the "Kellock Report." The Commission concluded that there was no reasonable relationship between safety in freight and yard service and the presence of a fireman on the locomotives. The Commission cited experience in both Canada and the United States in support of their conclusions. A rather ingenious method of protecting the firemen's employment rights was devised and some comments will be made in the concluding portion of this study relative to the efficacy of the method. On November 1, 1959, the carriers in the United States renewed their demands for complete company discretion in the assignment of crews, but shortly thereafter appeared to be content to take their case before the Presidential Commission assigned to study working rules. In the opinion of one authority, it

is the one work rule which is most likely to culminate in a carrier victory.[27]

Although the fireman issue is the most controversial and the area of "make-work rules" on which the carriers have centered their greatest attention, it is by no means the only issue involved in the crew consist problem. More recently it has become the contention of the railroads that technology has made at least one of the brakemen (flagmen) obsolete. Frequently the allegation has been made that freight and yard trains might well operate under given circumstances with only an engineer and a conductor whose main duties would be a rear look-out.[28] The Brotherhood of Railroad Trainmen, on the other hand, continue to insist that there are many hazards to safety which may be overcome only by full crews and, in one instance, concluded, "Road or yard crews on the nation's railroads still must have not less than a conductor or foreman and two trainmen to work

---

[27]Morris A. Horowitz, "The Diesel Firemen Issue on the Railroads," Industrial and Labor Relations Review, XIII (April, 1960), 558.

[28]National Association of Railroad and Utilities Commissioners, Report of the Special Committee to Study Railroad Problems (Washington: National Association of Railroad and Utility Commissioners, 1960), pp. 4-5.

efficiently and safely, and perform all that the railroads' rules and regulations require of them."[29] The excess costs, if any, associated with "unnecessary" crewmen will be indicated in the cost study in the following chapter.

Constructive allowance payments or "arbitraries."

Perhaps the earliest authority on railroad working rules, William Z. Ripley, best defined what a constructive allowance or "arbitrary" is when he stated that, "an arbitrary, so called, is a payment for services rendered or for hardships endured which in theory are not necessarily a part of the work which crews are assigned."[30] This is, of course, the view taken by the workers, while the carriers regard the payments as compensation for work which has either already been paid for or work which is reasonably associated with the employee's main task. It seems likely that in the minds of some they represent concessions on the part of the railroads to secure agreements to contracts.

---

[29]Statement of the Vice-President of the Brotherhoods of Railroad Trainmen in Trainmen News (Cleveland), August 7, 1961.

[30]Ripley, op. cit., p. 340.

There exists at present on most railroads a great variety of these allowances. The Illinois Central Railroad, for example, has some seventy-five codes used to designate the particular kind of allowances paid for. The following will describe some of those more important in terms of cost to the railroads.

Payment for various delays are among the more costly forms of constructive allowances. In describing this category of arbitraries, reference will be made only to the engineer agreements as the wording is similar to that in other classifications. In order of their appearance in the rules, the most important delays are (a) initial terminal delay, (b) final terminal delay, and (c) held away from home terminal.

Initial terminal delay is the result of the train not leaving on schedule. Payment is made for engineers in freight service "after (1) hour and fifteen (15) minutes' unpaid terminal time has elapsed from the time of reporting for duty up to the time the train leaves the terminal, at one-eighth (1/8th) of the daily rate . . ."[31] Thus, in the

---

[31] Schedule of Wages of Locomotive Engineers, Illinois Central Railroad, March 1, 1953, Articles 13-14, pp. 15-16.

example of the Chicago-Clinton, Illinois, trip already referred to, the engineer had an initial terminal delay of two hours (scheduled to depart at 9 A.M., actually departed at 11 A.M.). Payment is made on the minute basis and he would be entitled to the equivalent of 120 minutes at 5.05¢ per minute additional to his mileage payment or a total of $6.06 for the initial terminal delay. The computation is essentially the same for passenger service except that "preparatory time" may not be used in computing the allowance. Initial terminal delay is typical of the pay guaranteed by many industries if a worker is called for duty but the work is not readily available.

Final terminal delay is quite common in freight service as payment begins "30 minutes or more from time engine arrives at designated main track switch to point of final release . . . (and) paid for at pro rata rate . . . at 3/16 of the daily rate for all time thereafter."[32] Switching and spotting may frequently be extensive and a delay of two or more hours is not uncommon. In the event of a two

---

[32] Ibid., Article 15, pp. 16-17.

hour delay, payment for an engineer would be based on one and one-half hours at 3/16ths of the daily rate or the equivalent of thirty-three additional miles (see Appendix A-2) at the aforementioned rate of 24.25¢ per mile or a total of $8.00 additional to his basic daily or mileage guarantee. In the example of the Chicago-Clinton run used throughout, there would be no final terminal delay since St. Louis was the final terminal.

The holding of road crews away from their home terminal represents a considerable remuneration on the part of the railroads. The rules provide that "engineers in pool freight and in unassigned service held at other than home terminal will be paid continuous time for all time so held after the expiration of sixteen hours from the time relieved from previous duty, at the regular rate per hour paid them for the last service performed . . ."[33] However, in no case will the payment exceed eight hours in any twenty-four hour period even if there are several consecutive days involved. The time paid for ceases when deadheading (return to home terminal as a passenger) or service begins. For example,

---

[33] Ibid., Article 31, pp. 33-34.

assume that the engineer on the dispatch freight, Chicago-Clinton, arrived in Clinton at 3 P.M. one day and was ordered the following morning to deadhead the "Green Diamond" passenger train back to Chicago, his home terminal, the next evening at 7 P.M. He would then be entitled to eight hours pay for "held away from home terminal," the length of time represented by the difference between the sixteen hours which expired at 9 A.M. the following morning and his departure time at 7 P.M. He would not be entitled to more than that eight hours, however, because another sixteen hours had not elapsed before he was ordered to deadhead. Thus, the engineer under consideration would have received $24.25 for the eight hours held away. In addition, he would receive pay for passenger train deadheading at the prescribed rate of $20.01 per one-hundred miles and a pro rata amount for all miles in excess of one hundred miles. It should be noted, however, that the crewman must pay for his own meals and lodging while away from his home terminal. For most employees this represents considerable double domicile expense.

In addition to delays and deadheading, there are numerous other constructive allowances such as that paid

when a crewman is called for duty and then released because a train is annulled or set back. In such cases the engineer "shall be allowed 12½ miles per hour while held on duty with a minimum of thirty-one miles . . ."[34] The engineer in our example would thus receive $7.52 minimum for being called, then released.

Other examples of constructive allowances might include such items as payment for a crewman "tied up" before the expiration of fourteen hours on an uncompleted trip due to the federal sixteen-hour law which prohibits train crews from working beyond sixteen hours in any given day; payment for coupling air hose when carmen are employed and on duty; handling of newspapers by baggagemen in excess of a certain weight; turning engines on wyes, and many others too numerous to mention here.

It should be pointed out that constructive allowances are not necessarily "make-work" payments. The Interstate Commerce Commission requires railroads to compile these items and report them separately in order to provide more detailed statistical data and for no other purpose.

---

[34] Ibid., Article 8, p. 11.

Rates based on graduated scales. Equity demands that recognition be given to the need to adjust pay to the arduousness or responsibility associated with a given task. Such recognition has long been noted in the railroad industry. Although the original wage schedules did not include classification for size or type of engine, Ripley reports that the Wabash Railroad "paid higher wages on the 'six-wheel coupled engines' than on those with four wheels" as early as 1886.[35] Although some doubt was voiced as to the relationship between the size or weight of an engine and the increased difficulty of the engineer's task, there was no such doubt regarding the fireman whose task increased in an almost direct relationship to the weight and size of the engine. Thus, the firemen led the way in the rapidly developing classification system after the turn of the century.

There was also early controversy concerning the proper basis for the classification of locomotives, but weight on drivers was "held in the arbitration awards of

---

[35]William Z. Ripley, "Railway Wage Schedules and Agreements," Report of the Eight-Hour Commission, U. S. House of Representatives, 65th Cong., 2nd. Sess. (Washington: Government Printing Office, 1918), p. 320.

1912, 1913, and 1914-15, both for the engineers and firemen to be the best standard by which to measure physical effort for the men, as well as productive efficiency for the railroads."[36] Thus, it may be said that the current practice of graduated pay scales for enginemen was well established prior to the first World War and has changed only with regard to the increases in the size of engines and the rates themselves.

At the present time there are twenty weight classifications on the Illinois Central Railroad for both engineers and firemen (see Appendix C) ranging from "less than 100,000 lbs." to "950,000 - 1,000,000 lbs." The range of rates in engineer passenger service run from $20.26 per one-hundred miles to $21.78 for the same distance. The classification system is much more significant, however, in freight service where the rates range from $21.79 per hundred miles to a maximum of $25.15 for the highest listed weight classification.[37]

---

[36] Ibid., p. 321. Ripley refers to the Eastern Engineers' Arbitration, 1912; the Eastern Firemens' Arbitration, 1912-13; and the Western Engineers' Arbitration, 1914.

[37] Rates of pay effective March 1, 1961.

In addition to graduated scales of pay for differences in size of locomotives, train crewmen have for many years opposed what they considered to be an excessive number of freight cars on some trains. This heavy tonnage was made possible by the use of "double-headers" or the use of two engines to pull one train. Early opposition took the form of "penalizing it by the exaction of double pay for all conductors and brakemen employed on trains hauled by more than one engine."[38] This attempt on the part of the trainmen was generally unsuccessful and after the Eastern Conductors' Arbitration Award of 1913 denied them even time and one-half for more than one engine the method was abandoned in favor of positively prohibiting the practice and thus allaying the criticism that their efforts were associated with an attempt on their part to raise their wages.[39] Eventually a system developed which recognized the increased work and responsibility associated with longer trains through a graduated pay scale based on the number of cars.

---

[38]Ripley, op. cit., p. 322.

[39]Ibid.

At the present time on the Illinois Central these classifications are for freight service only and the number of cars range from "less than 81 cars" to "146 to 165 cars" with the rates for conductors ranging from $20.41 to $21.51 per hundred-miles with "20¢ added for each additional block of 20 cars or portion thereof."[40]

Monthly wage guarantees. If one is to assume the economic justice of guaranteeing a minimum daily compensation once service has begun, the same logic may be carried forward to include a guarantee of a minimum number of days within a month or even a year. Under this reasoning, "Readiness to serve, rather than actual performance, becomes the basis of pay."[41] Monthly guarantees may be found in the railroad industry as early as 1888 when the Southern Pacific Railroad provided for such a minimum and became rather common soon thereafter in the industry as a whole. Enginemen have seldom been given such assurances, possibly because the administration of their own working "pools" has traditionally

---

[40]Rates of pay effective March 1, 1961.

[41]Ripley, op. cit., pp. 317-18.

been left to the enginemen themselves. Thus, it is most frequently to be found in the conductor and trainmen classifications and most notably in passenger service where scheduling is more rigid but also where the opportunity for "make-up" service is more limited. A typical rule for trainmen states that "regularly assigned passenger trainmen who are ready for service the entire month and who do not lay off of their own accord, shall receive the monthly guarantee provided for in Article 1, exclusive of overtime . . ."[42] The guarantee is computed at the daily rate times thirty days. If a trainman or conductor lays off voluntarily during the month and is replaced by an "extra man" the combined wages of the two are added to determine if any guarantee is to be paid. If the wages of the trainman or conductor and his "extra man" plus their combined overtime, if any, do not produce the daily average when their total is divided by thirty, then a guarantee is paid. Overtime is used only in computing the average daily minimum guarantee. It will be

---

[42] Schedule of Wages and Rules for Trainmen, Yardmen, Switchtenders, and Car Retarder Operators, Illinois Central Railroad Company, July 1, 1957, pp. 6-11 (Italics added).

seen on evaluation of the monthly guarantee in the concluding chapter that the overtime exclusion is the source of greatest concern to rail management in this area.

SUMMARY

Formal working rules are to be found in many industries at the present time but they find their most unique expression in the railroad industry. Undoubtedly, this is due to the complex nature of railroading; to the fact that road crews do not report to a routine eight-hour-a-day assignment at the same locale daily. While hours are a measure of effort, distance and other factors become additional and justifiable bases for compensation. Perhaps an awareness of the highly competitive nature of railroading has also led to a feeling of insecurity which could only be overcome by a set of rules, minute in detail, but effective in restraining the possible arbitrary actions of rail management. Some of these rules have been severely criticized as having developed into requirements upon the companies of payment for work not performed or for unnecessary work. These include the dual basis of payment or a system of compensation for road service based upon a combination

hours-mileage computation. The criticism is not directed toward the system of computing the pay, however, but rather toward what the railroads have long claimed to be outmoded mileage bases.

Another set of rules which have been increasingly criticized are those dealing with the consist of crews, that is the number and kind of crewmen on a given train. Criticism is generally leveled at excess crews or classifications which it is alleged technology has made obsolete and unnecessary. Although the argument is not confined to the fireman classification, it is this position which has had the greatest reference.

Although less important economically, "arbitraries" or constructive allowances, graduated rate scales based upon weight of locomotive or number of cars hauled and monthly guarantees are criticized as being both costly and unnecessarily irritating to smooth and efficient operations.

The following chapter contains a statistical study of the actual costs incurred by the Illinois Central Railroad for the period 1951-60, when applicable, as a direct result of these rules. It will make no attempt to evaluate these

costs as to whether or not they are excessive as a result of "make-work" elements in them. Future chapters will both project and evaluate.

CHAPTER IV

THE EFFECT OF WORKING RULES ON RAILROAD REVENUE-- A CASE STUDY OF THE ILLINOIS CENTRAL RAILROAD

From a modest beginning as the first land grant railroad in the United States in 1851 with lines running from Cairo to East Dubuque, Illinois, and from Centralia to Chicago, the system has developed to include over six thousand miles of main track, over one thousand miles of supplemental main track and over three thousand miles of yard track and siding. Primarily a north-south system, the lines now extend north to Albert Lea, Minnesota, and south to New Orleans, Louisiana, with important east-west branches extending west to Sioux Falls, Sioux City and Council Bluffs, and east to Birmingham, Louisville and Indianapolis. The area served may be traced from the map labeled Figure 2.

Serving a rapidly developing agricultural, mining and manufacturing region, the railroad expanded its freight carrying activities from slightly over one-half million tons in 1860 to nearly seventy million tons in 1960. About one-fourth of the present total is represented by products of

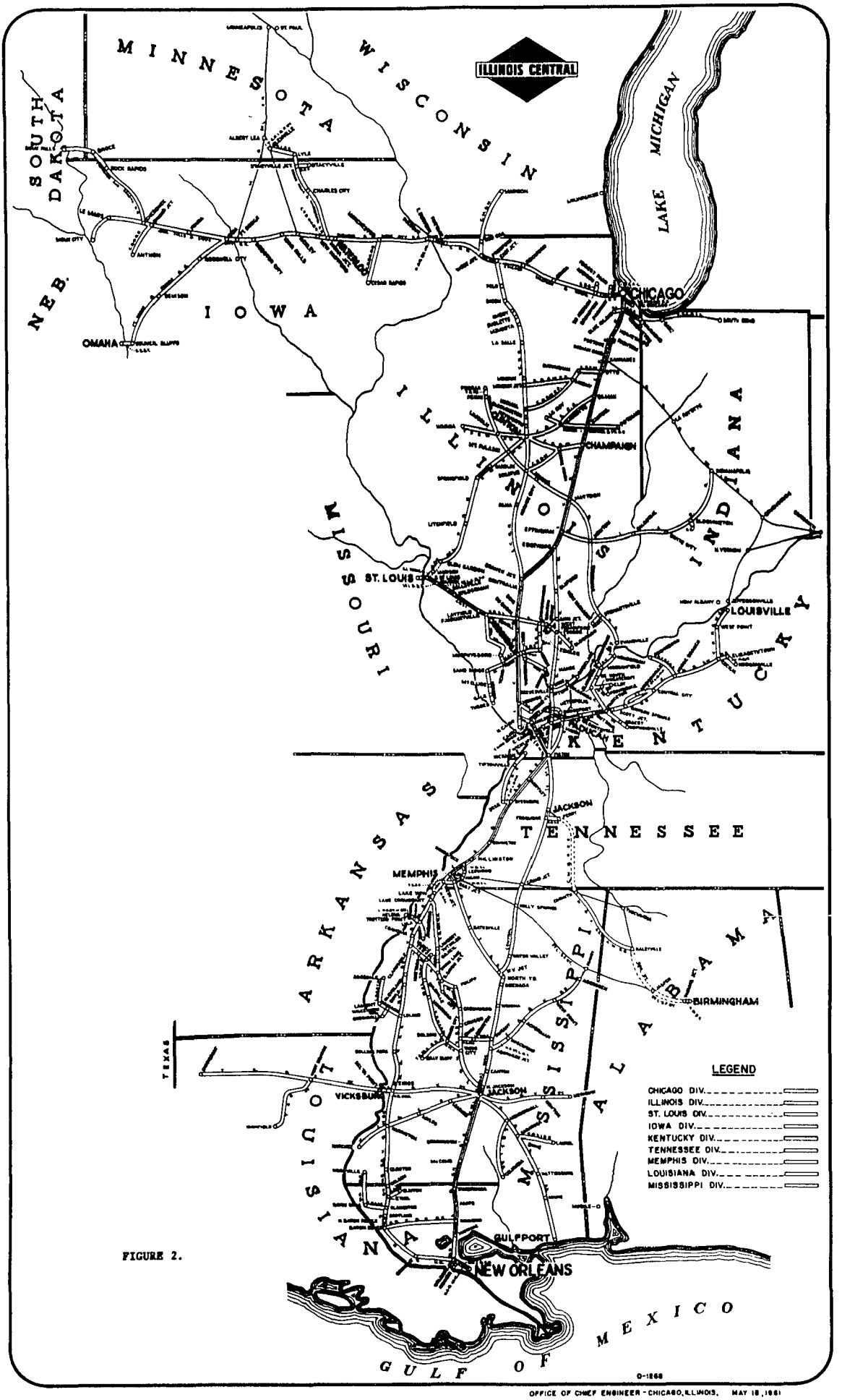
ILLINOIS CENTRAL
MINNESOTA
WISCONSIN
LAKE MICHIGAN
SOUTH DAKOTA
NEB.
IOWA
OMAHA
CHICAGO
ILLINOIS
INDIANA
CHAMPAIGN
ST. LOUIS
MISSOURI
LOUISVILLE
KENTUCKY
JACKSON
TENNESSEE
MEMPHIS
ARKANSAS
MISSISSIPPI
ALABAMA
BIRMINGHAM
TEXAS
VICKSBURG
JACKSON
LOUISIANA
GULFPORT
NEW ORLEANS
GULF OF MEXICO
LEGEND
CHICAGO DIV.
ILLINOIS DIV.
ST. LOUIS DIV.
IOWA DIV.
KENTUCKY DIV.
TENNESSEE DIV.
MEMPHIS DIV.
LOUISIANA DIV.
MISSISSIPPI DIV.
O-1268
OFFICE OF CHIEF ENGINEER - CHICAGO, ILLINOIS, MAY 18, 1961

FIGURE 2.

mines, principally coal. From a relative handful of passengers in 1860, the line today serves nearly three and one-half million passengers in through service and some twenty million in suburban service annually.

The Illinois Central System typifies the whole rich history of the nation's railroading. Often referred to as the "Main Line of Mid-America," the line is the tenth largest from the standpoint of gross revenue.[1] Because of its medium size among Class I railroads of the nation and because of its transcontinental character and the services which it performs, it has been selected as the most typical of Class I Railroads. It is neither predominantly urban, although Chicago is its key terminal, nor predominantly rural although it serves the important agricultural area of the midwest. In addition the coal mines of Kentucky and southern Illinois are important customers for the line.

The problems of the Illinois Central are essentially similar to those of railroads in general. If the line's

---

[1]Statement of Wayne A. Johnston, President, Illinois Central Railroad Company before the Senate Subcommittee Hearings on Problems of the Railroads, Part I, 1957, op. cit., p. 322.

sense of urgency for a solution is somewhat less than many others, it has indicated its concern with the problems of make-work rules no less emphatically. The following constitutes an empirical study of the effect of these rules on this one railroad. All data has been secured from the Railroad's main accounting and personnel offices in Chicago and verified by personal inspection of said record.

Financial History of the Line

A review of Table VII indicates quite clearly that the Illinois Central Railroad has followed the general pattern already indicated for all Class I railroads in the United States. Total operating revenues for 1960, lowest for the decade 1951-60, were only $260,225,000, a decrease of $26,355,000 over the ten-year average of $286,580,000. This represents a percentage decrease of 9.10 per cent which is somewhat greater than the decrease (5.86 per cent) for all Class I roads combined. The decline in Net Railway Operating Revenue of 30.74 per cent was somewhat less, however, than the corresponding decrease of 37.12 per cent for all Class I lines. This probably was due to the greater success of the Illinois Central in reducing expenses at a

TABLE VII

OPERATING REVENUES[a]

1951-1960

Illinois Central Railroad Company

(Thousand Dollars)

Item	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960
Total Operating Revenue	$295 092	$306 856	$308 374	$275 959	$294 525	$298 419	$289 756	$264 940	$271 652	$260 225
Freight Revenue	243 126	252 220	254 680	227 864	241 922	248 876	241 269	218 024	221 706	209 461
Passenger Revenue	23 298	22 943	23 356	21 180	22 480	21 986	22 308	21 265	22 347	22 580
All Other Revenue										
Mail	6 100	6 389	5 963	5 678	5 399	5 500	5 485	5 851	6 074	6 919
Express	2 229	3 662	3 562	2 620	3 753	3 009	2 513	2 317	3 165	3 296
All other	20 339	21 642	20 813	18 617	20 971	19 048	18 181	17 483	18 360	17 969
Total Operating Expenses	223 346	223 365	221 014	209 010	213 307	222 528	228 417	207 096	212 989	211 149
Net Railway Operating Revenue	$ 71 746	$ 83 491	$ 87 360	$ 66 949	$ 81 218	$ 75 891	$ 61 339	$ 57 844	$ 58 663	$ 49 076
Less Taxes	$ 36 310	$ 47 109	$ 47 604	$ 32 622	$ 41 638	$ 40 870	$ 31 364	$ 28 498	$ 31 569	$ 26 237
Railway Operating Income	$ 35 436	$ 36 382	$ 39 756	$ 34 327	$ 39 580	$ 35 021	$ 29 975	$ 29 346	$ 27 094	$ 22 839

[a]Source: Annual Reports to Stockholders.

[b]Includes other passenger, switching, joint facilities and miscellaneous.

faster rate than could be achieved by the industry in general. Taxes tend to decline, of course, with a decrease in revenue but the major saving in this area is due to the decline in payroll taxes as a result of reduction in employment. The employment history will be noted later in the chapter.

The ratio of operating expense to operating revenue has increased rather steadily having commenced the decade under study at 75.69 per cent, reaching a low point of 72.42 per cent in 1955 and thereafter increasing each year to a new high of 81.14 per cent in 1960. Expenses were calculated before taxes as taxes theoretically lie outside of management discretion.

A more detailed analysis of the revenue position of the Company reveals that while freight revenue declined over the period under study a total of 11.21 per cent, an average of 1.12 per cent as compared with 1.38 per cent for Class I railroads generally, passenger revenue actually indicated a slight increase of 0.92 per cent for 1960 over the decade. This is in contrast with an annual percentage decline of 3.93 per cent for all Class I roads in total. This is largely to be explained by the Illinois Central's

important suburban Chicago service, a source of revenue not available to all lines. It is important to note, however, that freight represents 82.32 per cent of total revenue which is consistent with the figure of 84.35 per cent for all Class I roads combined. Thus, being able to maintain its revenue with respect to passenger service is of only small consolation to the Company in face of its seriously declining freight revenue. Mail and express have increased slightly over the period in question while "all other" has decreased somewhat.

An analysis of the sources of declining revenues from Table VIII reveals that freight carloadings declined 11.68 per cent for 1960 over the ten-year average which is coincident with the 11.21 per cent decline in freight revenues. Average freight rate increases amounting to 0.31 per cent per year were undoubtedly offset by excessive losses in those areas of the service in which rates were not increased in proportion to the loss of tonnage carried. There is no reasonable way to analyze losses by territory or specific product. Losses by major category may be seen upon scrutiny of Table VIII.

TABLE VIII

FREIGHT CARLOADINGS AND REVENUE PASSENGER-MILES

1951-1960

Illinois Central Railroad Company

Item	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960
CARS OF REVENUE FREIGHT LOADED	2 021 741	1 978 965	1 965 227	1 852 534	2 021 432	2 020 334	1 865 185	1 679 423	1 733 730	1 660 335
Grain and Grain Products	92 299	88 705	98 651	88 189	92 190	92 911	92 729	95 259	83 343	80 308
Live stock	86 107	88 212	86 387	81 884	80 317	75 609	65 405	60 774	61 983	56 451
Coal	528 414	497 259	488 117	476 629	572 194	593 654	519 651	434 583	428 613	395 592
Coke	7 231	5 696	11 288	8 500	15 484	14 019	16 649	11 755	15 513	14 537
Forest Products	146 996	139 664	202 136	179 615	194 671	196 146	176 245	160 598	172 296	168 292
Ore	20 025	25 049	29 567	21 934	22 908	22 654	29 370	20 970	20 068	15 462
Merchandise, LCL[a]	212 067	574 702	502 746	442 340	422 035	386 360	326 091	296 186	254 672	217 165
Miscellaneous	878 602	499 678	546 335	553 443	621 633	638 926	639 045	599 298	697 242	712 528
REVENUE PASSENGER-MILES[b]	c	1 047 563	1 025 539	889 997	955 368	925 312	884 717	825 267	831 331	847 976
Passengers carried	c	36 978 574	35 060 865	30 207 967	30 835 793	29 507 833	27 989 493	25 649 671	23 441 524	23 012 878

[a]Calculated on the basis of 3.24 tons per car.

[b]Thousands of miles.

[c]Figures not available on same basis due to changes in accounting techniques.

Revenue passenger-miles declined 7.30 per cent in 1960 from the ten-year average. A decrease is indicated for every period except 1955 and 1959. Approximately one-third of total revenue passenger-miles on the Illinois Central is suburban as the line operates the second largest commuter service in the nation.[2]

Normally, a decline in revenue passenger-miles results in declining revenues; in this case, however, average annual increases of 0.27 cents per passenger-mile resulted in total revenues over the period which were subject to surprisingly little fluctuation. This is in contrast with all Class I railroads whose lack of commuter service generally, precluded such annual increases in revenue per passenger-mile. Nevertheless, total revenue passenger-miles declined by some sixty-seven million in 1960 under the ten-year average. The largest share of the loss was suffered in "through" service. Commuter service has generally maintained its position in spite of increased urban use of the automobile. Operating expenses were not reported to the Interstate Commerce Commission or to the stockholders by freight and passenger

---

[2]The Long Island Railroad is first.

service separately. In a special study made by the Commission for the year 1959, however, the Company reported a deficit of $15,464,000 for "passenger and allied service."[3] Previous reference has been made to the question surrounding the method utilized by the Commission for the determination of passenger service cost (see Chapter II, page 23) and will not be reviewed here. The general conclusion is that the Company regards the service as being on rather unsound footing.

In summarizing the financial position of the Illinois Central, it might be worthwhile to consider the rate of return on investment which seems to cause the greatest long-range concern to the Company. It may be noted from Table IX that the rate of return on investment after depreciation has declined consistently since 1955 with some fluctuations prior to that time. In the years 1956-60, the average annual rate of decline has been 11.15 per cent. Expressed in another way, the rate of return on investment after depreciation declined from 5.92 per cent in 1955 to 3.65 per

---

[3] Transport Economics (Washington: Interstate Commerce Commission, May, 1960), p. 3.

TABLE IX

RATE OF RETURN ON INVESTMENT AFTER DEPRECIATION

Illinois Central Railroad Company

1951-1960

Year	Investment[a] After Depreciation	Rate of Return[b] on Investment After Deprec.	Percent Increase or (Decrease)
1951	$543 322	6.52%	--
1952	550 179	6.61	1.38
1953	558 560	7.11	7.56
1954	564 141	6.09	(14.35)
1955	569 106	6.79	11.49
1956	591 493	5.92	(12.81)
1957	609 891	4.91	(17.06)
1958	612 530	4.78	(2.65)
1959	617 727	4.39	(8.16)
1960	625 158	3.65	(16.86)

[a]As of December 31st, each year.

[b]Based on railway operating income after taxes but not excluding interest and other fixed charges.

cent in 1960. The latter figure is still 1.52 per cent higher than the average for all Class I railroads for the same period.

Employment History of the Line

The policy of the Illinois Central regarding reduction of the labor force in road service has been generally consistent with that of all Class I roads (see Table VI). The most significant phase of the retrenchment has occurred in the five-year period 1956-60, presumably because dieselization became virtually complete during that time.

Employment of road service personnel diminished overall from 4,188 in 1956 to 2,502 in 1960. This represents a dwindling in the enginemen and trainmen roles of 40.26 per cent, 1960 as compared to 1956. Table X illustrates this decline by individual classification and in total. Only one category, firemen in local freight service, showed an increase for the period and this may be explained by the fact that firemen were subject to employment reduction faster than could be attributed to normal attrition. Road firemen in through freight service, for example, were reduced 60.19 per cent in the five-year period under study.

TABLE X

NUMBER OF EMPLOYEES AND THEIR COMPENSATION[a]

TRAINMEN AND ENGINEMEN

Illinois Central Railroad Company

1956-1960

Road Service Classification	1956		1957		1958		1959		1960		Employees Per cent Increase or (Decrease) 1960 Over 1956	Compensation Per cent Increase or (Decrease) 1960 Over 1956
	Number of Employees	Straight Time Compensation	Number of Employees	Straight Time Compensation	Number of Employees	Straight Time Compensation	Number of Employees	Straight Time Compensation	Number of Employees	Straight Time Compensation		
Road Conductors - Passenger	153	$ 1,124,556	142	$ 1,[illegible]	139	$ 1,152,453	134	$ 1,[illegible]	135	$ [illegible]	(11.76)	1.32
Road Conductors - Through Freight	337	1,855,337	309	1,723,318	242	1,339,772	234	1,[illegible]	283	1,586,625	(39.17)	(14.38)
Road Conductors - Local Freight	174	971,744	164	1,008,525	149	1,021,[illegible]	136	1,[illegible]	134	1,057,053	(1.49)	8.68
Road Baggagemen - Passenger	87	606,849	8	620,[illegible]	94	644,305	72	6[illegible],248	81	628,271	(6.90)	3.53
Road Brakemen or Flagmen - Passenger	99	539,381	92	573,[illegible]	87	610,[illegible]	87	597,937	76	598,883	(23.23)	11.03
Road Brakemen or Flagmen - Through Freight	342	1,278,218	667	1,[illegible]	593	1,[illegible]	586	1,[illegible]	424	1,876,249	156.58	(22.26)
Road Brakemen or Flagmen - Local Freight	477	2,326,137	469	2,467,835	438	2,475,[illegible]	454	2,582,[illegible]	42	2,604,982	(11.74)	11.99
Road Engineer - Passenger	204	1,347,740	197	1,449,692	181	1,505,[illegible]	142	1,442,244	155	1,[illegible],183	(22.55)	5.68
Road Engineer - Through Freight	427	2,112,653	393	2,051,852	260	1,812,[illegible]	214	1,[illegible]	222	1,842,756	(50.54)	(12.78)
Road Engineer - Local Freight	140	1,[illegible]	140	1,275,342	152	1,222,[illegible]	143	1,244,213	136	1,[illegible]	(17.65)	(0.84)
Road Firemen - Passenger	138	740,837	134	731,349	113	686,[illegible]	106	691,822	104	777,412	(19.85)	8.76
Road Firemen - Through Freight	515	1,725,807	478	1,[illegible]	336	1,493,822	308	1,[illegible]	205	1,940,469	(60.19)	(10.73)
Road Firemen - Local Freight	147	1,[illegible]	147	1,[illegible]	85	1,051,774	68	1,[illegible]	108	1,[illegible]	14.29	8.64
Per cent Increase or (Decrease) '60 '56											(40.26)	(1.66)

Source: Monthly Report of Employees, Service, and Compensation, Form A, I.C.C. Wage Statistics, Illinois Central Railroad, for 1960

Undoubtedly, the excess in the reduction over that of normal attrition was simply transferred to the local freight service on a seniority basis. This is probably true of other classifications as well, but to a lesser extent.

The decline in the road service labor force was not the result of changes in working rules which might permit reduction in the consist of crews, but rather to cut-backs in service, increased speed of trains, longer trains, and to the adoption, generally, of new technological efficiencies. It is impossible to assign specific causation to the reduction in specific cases as the Railroad does not compile such data for publication. The reduction at this stage has doubtlessly come about through retirement, death, disability or voluntary termination with replacement through hiring of new personnel no longer being made at a rate which would maintain the level of employment.

The Effect of "Make-Work" Rules on Revenue

The entire effect of certain working rules on total revenue cannot, in all probability, be determined. This is true even when a study is made of a single railroad because it is impossible to be certain in every case that the cost

associated with the rule is indeed "excessive" or whether it is a cost which is necessarily incurred due to the unique nature of the service. It must also be remembered that the concept of "make-work" rules is itself a subjective one. Nevertheless, reasonable assumptions may be made regarding the character of those rules previously described as "make-work" rules, and these assumptions form the basis of the cost comparisons which follow.

The dual basis of payment. A review of the general nature and character of the dual basis rules was made in the preceding chapter. Some of these characteristics have been criticized as resulting in wage payments which do not reflect actual work performed or which represent excessive payments due to unrealistic or outmoded bases. An evaluation of the validity of these assumptions will be deferred to a later chapter. The following table (Table XI) represents a statistical study of the costs associated with the dual basis of compensation for road service employees.

The statistical evidence presented in Table XI assumes the hour-wage method of compensation. That is, the assumption has been made that railroad road service employees could

TABLE XI

COMPARISON OF THEORETICAL VERSUS ACTUAL COMPENSATION

ROAD SERVICE EMPLOYEES

Illinois Central Railroad Company

1951-1960

Road Service Classification	1960 Theoretical Rate[a]	X	1960 St. Time Hours Actually Worked	=	1960 Theoretical Compensation	1960 Actual Compensation	1960 Difference Due to Dual Basis	1960 Effective Rate	Difference Due to Dual Basis System 1959	1958	1957	1956	Total 1951-1955	Total 1951-1960
Road Conductors - Passenger[b]	$2.546/Hr.		204 252		$ 520 024	$ 1 139 941	$ 619 915	$5.581/Hr.	$ 614 275	$ 618 708	$ 584 635	$ 593 407	$ 2 584 005	$ 5 614 945
Road Conductors - Through Freight	2.513		373 926		939 676	1 588 605	648 929	4.248	669 065	625 942	654 921	636 332	3 175 264	6 410 453
Road Conductors - Local Freight	2.585		350 288		905 595	1 056 053	150 951	3.015	143 278	141 053	123 626	90 127	495 782	1 144 425
Road Baggagemen - Passenger[b]	2.257		122 437		276 340	628 291	351 825	5.132	341 846	360 800	336 631	328 140	1 521 667	3 241 035
Road Brakemen & Flagmen - Passenger[b]	2.236		118 541		265 058	598 883	333 737	5.052	333 676	339 715	315 500	292 224	1 304 481	2 919 421
Road Brakemen & Flagmen - Through Freight	2.296		735 856		1 689 512	2 876 249	1 186 442	3.908	1 219 781	1 140 554	1 137 313	1 141 856	6 004 162	11 890 411
Road Brakemen & Flagmen - Local Freight	2.356		944 841		2 226 045	2 604 982	378 501	2.757	316 417	331 095	303 882	208 416	1 014 490	2 553 237
Road Engineers - Passenger[c]	4.101		224 760		921 741	1 477 183	555 806	6.572[d]	688 540	910 515	917 090	814 861	3 602 556	7 689 004
Road Engineers - Through Freight	2.936		387 008		1 136 255	1 842 756	706 030	4.762	722 579	665 404	667 022	607 818	2 726 895	6 096 219
Road Engineers - Local Freight	2.998		385 025		1 154 305	1 300 551	146 559	3.378	124 154	108 768	85 891	36 067	43 207	544 333
Road Firemen - Passenger[c]	3.592		148 554		533 606	990 412	456 937	6.667	643 752	654 104	612 460	594 495	2 657 705	5 619 322
Road Firemen - Through Freight	2.509		376 819		945 439	1 540 469	595 246	4.088	539 485	550 020	552 880	518 673	2 242 680	5 058 768
Road Firemen - Local Freight	2.478		386 347		957 368	1 097 334	139 966	2.840	91 392	89 429	60 832	23 512	(67 915)	337 216
TOTALS					$12 470 966	$18 741 709	$6 270 844		$6 708 242	$6 536 107	$6 412 689	$5 885 928	$27 304 979	$58 118 789

[a]Weighted average of all pay scales for year.

[b]Rate based on average of 81-105 cars for all trainmen and conductors.

[c]Rate based on average weight on drivers of 400,000 - 450,000 lbs passenger service, and 700,000 - 750,000 lbs freight service for all engineers and firemen.

[d]Relatively low engineer rate in comparison to firemen due to 76,206 straight time hours in reduced speed suburban service.

be paid on the basis of hours of work actually performed instead of the present method of converting miles run to their time equivalent. All railroads are required to report to the Interstate Commerce Commission the straight time hours paid for.[4] In determining the compensation for hours not actually worked it was necessary to compute the average annual wage for each road service classification. This is done by the weight-average method utilizing straight time hours actually worked for each category for each year as the weighting factor. This method was necessitated by the fact that the employees in question worked under a multiple set of rates during most years involved in the study. The formula is:

$$HW = r_1h_1 + r_2h_2 + \ldots . r_nh_n + \Sigma h$$

where HW equals the average annual hourly wage and r equals the rate, h the straight time hours actually worked and Σh the annual total straight time hours actually worked. Once the average annual hourly rate is determined for each classification it is then multiplied against the straight time hours actually worked for the year to derive the theoretical compensation which would be paid assuming this class of

---

[4]Monthly Report of Employees, Service and Compensation, ICC Wage Statistics, Form B.

employees were paid on the customary time basis rather than a piece-rate (miles) basis. The difference between the straight time compensation actually paid and the derived theoretical compensation represents the excess payment which might be attributed to the dual basis payment system (see Figure 3). It will be recalled that this excess payment might result from runs shorter than one hundred or one hundred and fifty miles in which a full day's wage would be paid, but more significantly it is likely to result from unrealistic speed bases. For example, an engineer on a passenger train which averages fifty miles per hour and who is assigned a two-hundred mile run would work four hours (assuming away preparation and terminal delays) and receive two day's pay. At the rate previously used to describe these rules[5] his effective hourly rate for that particular run would be $10.47 per hour in contrast to the computed average annual contract rate of $4.10 per hour. On the basis of the above described computations, Table XI reveals that the total difference between the theoretical compensation and the actual compensation amounted to $6,270,844 for

---

[5]See page 51 ff., supra.

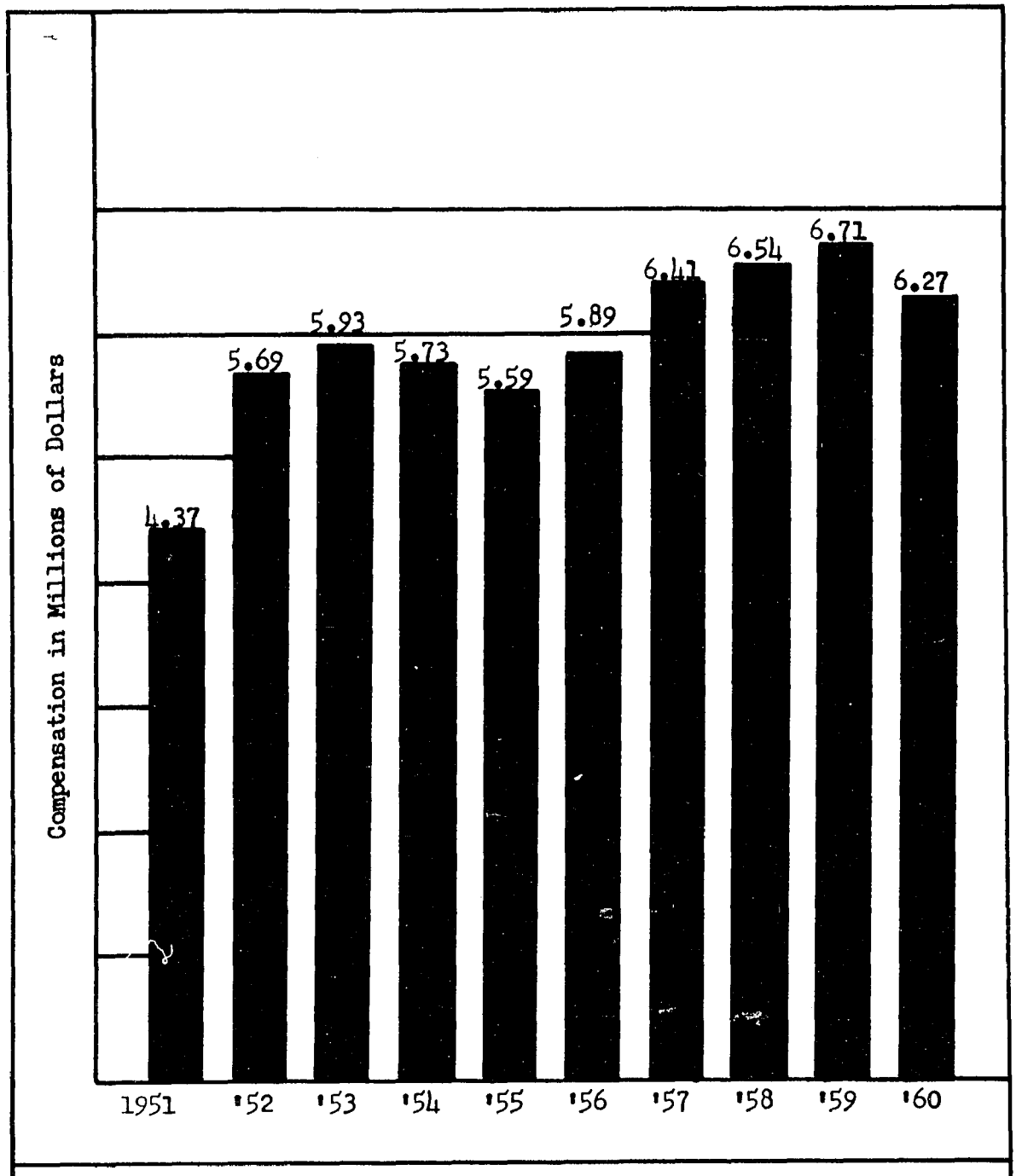

FIGURE 3.

DIFFERENCE BETWEEN ACTUAL AND THEORETICAL COMPENSATION
DUE TO DUAL BASIS OF PAYMENT SYSTEM
ILLINOIS CENTRAL RAILROAD
1951-1960

the year, 1960. This sum represents 33.45 per cent of the total actual compensation for that year for road service employees and is 5.66 per cent above the annual average of $5,911,839 for the entire decade under study. A more detailed analysis indicates that enginemen evidence a much higher proportion of the excess costs than can be explained by the ratio of their employment to the total. This is particularly true of passenger engineers and firemen. For example, in 1960[6] engineers received 8.85 per cent of the excess while representing only 6.31 per cent of the total employees and passenger firemen received 7.43 per cent of the total while representing only 4.84 per cent of the total employees. This may be explained by the fact that the passenger speed basis is even further removed from reality than the freight speed basis and also to the fact that for passenger enginemen one hundred miles constitutes a day's work while one hundred and fifty miles composes the basic day for the trainmen. The foregoing may be noted from Table XII.

Another, and perhaps more realistic, approach to the computation of excess expense attributed to the dual system

---

[6]Based on the average number of employees for the year.

TABLE XII

RATIO OF EXCESS COMPENSATION TO TOTAL ROAD SERVICE EMPLOYMENT BY INDIVIDUAL CLASSIFICATION

Illinois Central Railroad Company

1960

Road Service Classification	Per cent of Total Excess Compensation	Per cent of Total Employment
Road Conductors - Passenger	9.89	5.39
Road Conductors - Through Freight	10.35	8.19
Road Conductors - Local Freight	2.40	6.16
Road Baggagemen - Passenger	5.61	3.24
Road Brakemen & Flagmen - Passenger	5.32	3.04
Road Brakemen & Flagmen - Through Freight	18.93	16.35
Road Brakemen & Flagmen - Local Freight	6.04	16.83
Road Engineers - Passenger	8.86	6.32
Road Engineers - Through Freight	11.27	8.43
Road Engineers - Local Freight	2.33	6.79
Road Firemen - Passenger	7.28	4.36
Road Firemen - Through Freight	9.49	8.19
Road Firemen - Local Freight	2.23	6.71
	100.00	100.00

is to concede the necessity of the piece-rate system but to substitute a more accurate set of mileage bases. Although exact averages are difficult to obtain the following tabular calculations are based on the speed ratios below which were computed by the Illinois Central Railroad for the year, 1960.

Type of Service	Old	New
Passenger, all types	20.0	40.3 mph
Freight, all types	12.5	18.5 mph

The probable explanation for the greater change in passenger service vis-a-vis freight service is that freight trains have become increasingly heavier in response to the increase in driver power. On the other hand, the significant decline in passenger business has made longer trains unprofitable in that service.

In order to compute the possible excess expense directly attributable to outmoded speed bases, the new rate was divided into the old rate to obtain a percentage factor which could then be applied against actual compensation to reduce the actual compensation based on the new speed bases.[7]

---

[7]The formula might be expressed: $1 - \frac{r_1}{r_2} \times C_a = E_x$, where r_1 is the old speed, r_2 is the new speed, C_a the actual compensation and E_x equals the excess expense.

The difference between the two yields the excess expense resulting from the slower rates. It may be seen from Table XIII that the excess compensation theoretically attributable to outdated speed bases is somewhat greater than when contract rates were multiplied against straight time hours actually worked. For example, for the year 1960 the latter method of computation yielded an excess expense 9.74 per cent above that of the former method. This is considerably less than the 16.37 per cent for the entire ten-year period under study. Although there may be numerous other reasons, the discrepancy does suggest that perhaps the new speed bases are unrealistically high when applied over the decade and become accurate with the increase in dieselization with each succeeding year. An evaluation of speed bases is reserved to the concluding chapter.

Consist of road crews. Perhaps the greatest difficulty in assessing excess expense to specific working rules is encountered in connection with the consist of road crews. With the exception of the fireman on diesel freight locomotives there is no real consensus among railroad officials as to what constitutes an excessive crew. The problem is

TABLE XIII

*EXCESS COMPENSATION ATTRIBUTED TO OUTMODED SPEED BASES**

Illinois Central Railroad

1951-1960

Road Service Classification	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	Total 1951-1960
Conductors - Passenger	$ 508 430	$ 546 319	$ 553 592	$ 539 063	$ 552 984	$ 566 548	$ 563 423	$ 580 607	$ 560 512	$ 574 302	$ 5 545 780
Conductors - Through Freight	660 909	700 451	668 837	578 574	597 680	601 871	575 336	506 052	524 203	515 343	5 929 256
Conductors - Local Freight	232 363	282 904	285 041	287 804	295 599	315 233	327 164	331 427	340 991	342 584	3 041 110
Baggagemen - Passenger	301 757	293 655	293 872	289 264	288 087	305 754	314 914	324 637	307 947	316 533	3 036 420
Brakemen & Flagmen - Passenger	262 473	252 055	254 671	257 000	258 138	271 740	289 128	307 552	301 241	301 717	2 755 715
Brakemen & Flagmen - Through Freight	1 266 462	1 269 784	1 200 090	1 027 285	1 063 196	1 063 454	1 028 856	912 141	946 520	933 055	10 710 843
Brakemen & Flagmen - Local Freight	613 715	660 208	674 624	690 394	717 457	754 599	800 566	803 060	837 731	845 056	7 397 410
Engineers - Passenger	630 697	673 441	668 307	666 993	674 090	704 181	730 456	758 570	726 603	744 205	6 977 543
Engineers - Through Freight	776 618	818 546	774 003	682 273	701 358	685 345	665 621	588 02.	609 975	597 790	6 899 550
Engineers - Local Freight	285 353	356 177	357 045	362 001	368 394	389 178	413 720	396 697	419 843	421 899	3 770 307
Firemen - Passenger	399 927	438 715	437 133	432 868	434 653	458 779	469 237	497 200	487 589	498 970	4 555 073
Firemen - Through Freight	643 267	684 535	650 238	556 549	566 759	559 787	537 255	484 596	506 886	500 053	5 689 925
Firemen - Local Freight	237 069	298 729	301 110	307 683	313 095	327 674	344 880	341 195	353 512	355 975	3 180 922
TOTALS	$6 819 042	$7 275 519	$7 118 563	$6 677 751	$6 831 490	$7 004 143	$7 060 556	$6 831 755	$6 923 553	$6 947 482	$69 489 854

*Computations based on new speed ratios of 40.3 mph for passenger trains and 18.5 mph for freight trains in contrast with 20.0 mph passenger and 12.5 mph freight on current bases.

further complicated by the presence of so-called "full-crew" laws in sixteen states and commission authority to regulate the size of railroad crews in seven other states. The Illinois Central Railroad is subject to law or regulation in this respect in Arkansas, Indiana, Louisiana (Commission regulation only), Mississippi and Nebraska; and is free from such restraint in Alabama, Illinois, Iowa, Kentucky, Minnesota and Wisconsin.

Enough variance exists in operating conditions to make it difficult to establish any definite number of crewmen for all trains operating under all conditions. It is generally conceded by the Companies that the term "excess crews" in road service refers to the fireman on the freight locomotive plus one brakeman--typically the "head-end" brakemen--on all service. This would reduce the passenger minima to an engineer, a fireman, a conductor and one brakeman (and in most cases a baggageman), and in freight service to a three-man crew consisting of the engineer, a brakeman and a conductor. At the present time there are usually two brakemen to each train and three in the case of "full-crew states" service. Table XIV shows the savings which would have accrued to the Company assuming the abandonment of the

TABLE XIV

SAVINGS IN COMPENSATION PAID ATTRIBUTED TO SELECTED REDUCTION IN CONSIST OF ROAD CREWS

Illinois Central Railroad

1956-1960

Year	Number of Firemen[a] Reduced	Compensation of Firemen Reduced	Number of Trainmen[b] Reduced	Compensation of Trainmen[c] Reduced
1956	662	$ 2 735 699	758	$ 3 071 868
1957	647	2 719 280	714	3 106 648
1958	493	2 545 567	574	2 948 882
1959	488	2 652 276	510	3 094 047
1960	373	2 637 803	453	3 040 057
Total, 5-years	2 663	$13 290 625	3 009	$15 261 502
Average, 5-year	533	$ 2 658 125	602	$ 3 052 300

[a]Includes all freight firemen, no passenger firemen.

[b]Arbitrarily includes exactly one-half of all brakemen and flagmen. This would be somewhat high in full-crew states.

[c]Average of all brakemen and flagmen since it represents one-half of actual compensation paid.

fireman position on all freight trains and the reduction of half of the trainmen on all trains (in "full-crew states" there would still be two brakemen under this assumption). Five-year averages indicate a saving of a little over two and one-half million dollars from the abandonment of the fireman position on road freight service and slightly over three million dollars per year if the brakemen consist were reduced by one-half. Thus, a saving would accrue to the Illinois Central of approximately five and one-half million dollars annually by reducing the train crews as indicated. This represents 30.19 per cent--nearly one-third--of total average compensation for road service employees on the line. Further reductions may well be called for by the Companies in the near future but these seem to be reasonable minima. An analysis of the validity of such reductions is deferred to a later chapter, however.

Constructive allowances or "arbitraries." Constructive allowances are payments which the Railroads contend are for work already paid for or for unnecessary work. The labor organizations, however, regard them as payments for work which is not a regular part of an employee's assignment

or for work which entails unusually difficult, dangerous or arduous duty. The various classes of assignments for which "arbitraries" are paid are too numerous to be categorized into cost accounts for the present purpose. The Illinois Central Railroad provides some 99 codes for present or expected allowances. Seven major accounts are maintained and reported to the Interstate Commerce Commission. These accounts are summarized in Table XV for the decade, 1951-1960. It will be noted that "deadheading" accounts for nearly fifty per cent of the total each year. Strictly speaking, deadheading may not be considered an "arbitrary." That is to say, it might well be removed before considering the constructive allowances which are to be considered "make-work" rules and which result in excess payments to the employees. This will be discussed at more length in the final evaluation. The total charged to these seven major accounts has normally amounted to between $600,000 and $700,000 annually or to roughly three per cent of total compensation. All remaining arbitraries would not be significant to one per cent.

TABLE XV

CONSTRUCTIVE ALLOWANCES

Illinois Central Railroad Company

1951-1960

(In Thousands of Dollars)

Selected Accounts	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	Total	Average
Deadheading	$333	$333	$328	$345	$366	$376	$361	$306	$302	$306	$3 358	$336
Called and Released	5	5	3	2	2	2	2	2	2	2	25	3
Run Around	5	5	5	6	6	7	4	3	4	4	49	5
Initial Terminal Delay	28	35	36	34	58	53	57	57	23	30	413	41
Final Terminal Delay	185	191	194	175	189	183	176	164	166	168	1 790	179
Laid Up A/C 16-hour Law	1	0	0	0	1	1	1	1	1	1	7	1
Held Away From Home Terminal	146	117	118	120	123	135	132	111	101	123	1 226	123
Totals*	$702	$684	$684	$683	$745	$758	$732	$644	$599	$634	$6 867	$687

*Individual numbers will not necessarily sum to totals due to rounding to thousands of dollars.

Graduated rate scales. Road crews are not paid on the basis of a single rate for a given type of service but rather upon a scale of rates classified according to weight on drivers or mallets for enginemen and to the number of cars hauled in the case of trainmen. It has generally been the contention of rail management that such classifications are no longer realistic under modern technological conditions. Thus, they allege that the lowest negotiated rate should be the rate applicable to road service employees. On this basis, Table XVI reveals the differential which existed in the year 1960 when the minimum contract rate was averaged for the year and then multiplied against the straight time hours actually worked in order to compare these totals with the actual compensation paid the employees. The difference represents 3.95 per cent of the total actual compensation for the year. A discussion of whether or not it is realistic to assume that the minimum rates would be negotiated is deferred to the concluding chapter. At this point it is sufficient to suggest that the average existing weights on drivers or number of cars hauled would more likely be the result of collective bargaining on this issue.

TABLE XVI

COMPENSATION OF ROAD EMPLOYEES BASED ON MINIMUM RATES

Illinois Central Railroad Company

Year 1960

Road Service Classification	Average[a] Minimum Rates	Straight Time Hours Paid For	Compensation Based on Minimum Rates	Actual Compensation	Difference Due to Graduated Scale
Road Conductors - Passenger	$2.713	404 603	$ 1 097 688	$ 1 139 941	$ 42 253
Road Conductors - Through Freight	2.446	626 684	1 532 869	1 588 605	55 736
Road Conductors - Local Freight	2.516	411 998	1 036 587	1 056 053	19 466
Road Baggagemen - Passenger	2.394	256 714	614 573	628 291	13 718
Road Brakemen & Flagmen - Passenger	2.385	249 901	596 014	598 883	2 869
Road Brakemen & Flagmen - Through Freight	2.229	1 236 815	2 756 861	2 876 249	119 388
Road Brakemen & Flagmen - Local Freight	2.288	1 114 431	2 549 818	2 604 982	55 164
Road Engineers - Passenger[b]	3.920	413 170	1 619 626	1 477 183	(142 443)
Road Engineers - Through Freight	2.631	623 723	1 641 015	1 842 756	201 741
Road Engineers - Local Freight	2.701	447 359	1 208 311	1 300 551	92 240
Road Firemen - Passenger	3.434	273 409	938 886	990 412	51 526
Road Firemen - Through Freight	2.240	615 227	1 378 108	1 541 469	163 361
Road Firemen - Local Freight	2.290	450 366	1 031 338	1 097 334	65 996
Totals			$18 001 694	$18 742 709	$741 015

[a]This represents a weighted average of three different wage rates during the year.

[b]This negative figure probably due to the large number of passenger engineers in suburban service.

Monthly wage guarantees. The Illinois Central Railroad reports that it simply does not permit a situation to develop under normal circumstances which would require the payment of monthly guarantees. It is not always possible, however, to prevent completely a guarantee situation from occurring. The Company reported that the sum is not likely to exceed one thousand dollars per month, and in summarizing the total costs associated with "make-work" rules, the figure of $12,000 per year will be used.

Summary of Financial Effects of "Make-Work" Rules

Enough evidence has been gathered at this point to make possible a summary of the additional expense attributed to those working rules which have been described as "make-work" rules. It should be recalled that the following totals in no way purport to encompass all additional expense associated with all working rules. It is in road service, however, where the major difficulty has arisen and it is in road service where the "make-work" characteristics of the rules may be most clearly delineated.

In summarizing the foregoing sub-totals (Tables XI-XVI) care has been taken to avoid double counting. The

excess expense attributed to the dual basis of pay, for example, consists of the average between the hours and the speed bases. In addition, those expenses associated with the theoretical reduction in the consist of crews has been subtracted from the dual basis totals since, clearly, if the firemen and brakemen are deleted from the roles they cannot be subject to excessive compensation at the same time. Similarly, the additional compensation due to graduated rate scales and constructive allowances have been reduced in the same manner. Since the primary purpose of the study is to establish the total net annual costs of the rules in question only the most recent year available (1960) has been summarized. The essential purpose of the multi-year study has been to establish the statistical validity of the most recent year. A close study of the data presented indicates that the year 1960 is a representative year within ordinary confidence limits. As projections are not contemplated over time it would seem that ten-year averages would be less meaningful than the most recent year. This is occasioned by the fact that the study envisions an industry in which employment has declined and is expected to continue to decline for some time in the future.

An analysis of Table XVII indicates the total expense associated with the specific rules discussed amounts to approximately eleven and one-half million dollars per year. This represents somewhat over half of the total compensation of road service employees and slightly over five per cent of total operating expenses. Elimination of these expenses would result in about one-fifth additional net railway operating revenue before taxes. Some taxes would be adversely affected, however, resulting in a counter influence on total operating revenues. This is particularly true of federal corporate income taxes which have an inverse relationship to expenses.

The major source of the expenses related to "make-work" rules is to be found in the consist of road crews. If the trainmen consist were left undisturbed the total would be reduced by some three million dollars per year. This should be noted, inasmuch as the railroads have concentrated their crew reduction attentions on the freight fireman with only passing reference to the train crews. It seems logical to conclude, however, that any success achieved in removing freight firemen will almost certainly lead to requests concerning train crew reduction as well. Thus, it appears

TABLE XVII

SUMMARY OF EXPENSE ATTRIBUTED TO "MAKE-WORK" RULES

Illinois Central Railroad Company

Year 1960

Class of Working Rule	Annual Expense Attributed to Rules
Dual Basis of Payment[a]	$ 4 818 919
Consist of Crews[b]	5 677 860
Constructive Allowances[c]	538 816
Graduated Rate Scales[d]	629 566
Monthly Guarantees[e]	12 000
TOTALS	$11 677 161
Per Cent of Total Road Service Compensation[f]	52.16
Per Cent of Total Operating Expenses	5.53
Addition to Net Railway Operating Revenue(before taxes) If Above Expense Eliminated - Per Cent	21.71

[a]Average of hours and speed basis after reduction in consist of crews.

[b]Compensation of all firemen in freight service and one-half brakemen in all service.

[c]Reduced in the ratio of eliminated firemen and brakemen.

[d]Reduced in the ratio of eliminated firemen and brakemen.

[e]Estimate.

[f]Includes Straight Time Compensation, Constructive Allowances, and Overtime.

appropriate to consider this question in any overall analysis for the future. The following chapter will attempt to project the conclusions arrived at in the case study of the Illinois Central Railroad to all Class I line haul railroads in the United States.

CHAPTER V

FINDINGS AND EVALUATIONS

This study has briefly outlined the general nature of railroad problems and has surveyed specifically and in some detail the character and financial effects of "make-work" rules. Before proceeding to project the findings of the case study and to analyze their effects on railroads generally, a review of the stated objectives of the study may well be in order. It has been the primary purpose of this study to determine the actual financial costs of certain working rules and the effect of these costs on railroad revenue. Only those rules which can be clearly defined as possessing certain "make-work" characteristics have been selected for analysis. The entire study has been confined to rules governing road service employees since it is this group which labors under circumstances unique to the railroad industry. A second and equally important purpose of the study is to analyze the findings with a view to determining if the rules produce an unreasonable burden on

railroad financial health and if so whether elimination or modification of the rules will result in financial remedy. The major methodology has been a case study of a representative Class I railroad and has involved both statistical and interviewing techniques. This chapter will project the findings of the study and attempt to evaluate them in a manner suggestive of possible solutions to the problem.

Findings

The foregoing case study has suggested the magnitude of the financial effects of certain working rules on the revenue of a single Class I railroad--the Illinois Central Railroad. There are clear advantages to a limited study of this type. For example, the data is less voluminous and is subject to more careful control and may be more easily verified as to accuracy. The findings are even more valuable, however, if they are capable of being projected with reasonable validity to all Class I railroads.

At the present time there are about one hundred and ten such railroads in the United States; and they "cover the operations of approximately 96 per cent of the total railroad mileage of the United States, and earn about 96

per cent of the total revenue."[1] In the year 1960, the Illinois Central Railroad earned 2.735 per cent of the total revenues for all Class I roads. Thus the projection sample is a relatively small one. The size of the sample is not as significant, however, as the degree of confidence which can be attributed to its use as a projection device. The problem in this case is to determine, insofar as it is possible to do so, if the railroad under study is sufficiently representative to permit valid projections. In gathering evidence of its representative status five key areas of agreement were investigated. Those judged to be highly significant are (1) total operating revenue, (2) total operating expense, (3) total compensation of road service employees, (4) the average number of road service employees, and (5) freight revenues. The percentage which the Illinois Central Railroad represents of the total reflects the degree of consistency (or lack of it) when comparing the Railroad with that of all Class I roads in these important areas. The following is an analysis of the reasons for selecting these particular categories.

---

[1]Association of American Railroads, Statistics of Railroads of Class I in the United States, Years 1950 to 1960 (Washington: Association of American Railroads, 1961), Title page.

Total operating revenue. Total revenue is perhaps the most accurate measure of the volume of business attributed to a specific railroad and significant projections could possibly be made on this basis alone.

Total operating expense. Since this study is concerned with rail operating expenses it is necessary to ascertain that the operating expenses of the sample railroad bears the same close relationship to total Class I operating expenses as the individual revenue bears to the total revenue. If it should not, the conclusion may well be drawn that there is a significant difference in the nature of the operation.

Total compensation of road service employees. A more refined test of expense is that which compares the total compensation of road service employees of the Illinois Central Railroad with that of all Class I roads since the study is primarily involved with the alleged excess expense associated with the compensation of this particular group of employees. Failure to coincide closely in this category would render other comparisons invalid for the

purposes of this study.

Average number of road service employees. Compensation of road service employees might be representative on the Illinois Central when compared to the same cost category on all Class I lines but the degree of "featherbedding" could be quite different if there were any important difference in the number of employees whose compensation make up the excess expense. There are notable limitations to the comparison, principally the fact that the excess expense associated with the rules make up only a part of the total compensation.

Freight revenue. A further refinement is necessary to make certain that no significant distortions arise because of any possible disproportion between freight and passenger service. Because of the differences in the basis of pay as between the two services, an excess of one or the other could render results which might be misleading. This is particularly true of the Illinois Central because of the unusually large amount of suburban passenger service offered by the Company.

The following represents the proportionate share of the Illinois Central with respect to total Class I railroads for each category:

Total operating revenue 2.735%
Total operating expense 2.364
Total compensation of road serv. employ...2.549
Average number of road serv. employees....2.467
Freight revenues 2.609

While it is true that no perfect correlation exists between these percentages and the actual excess expense attributed to "make-work" rules for all Class I roads, it may be reasonably assumed that a correlation does in fact exist somewhere between the outer limits of 2.735 per cent as the upper and 2.364 per cent as the lower range. That is to say, when the reciprocal of these percentages are multiplied against the total "excess expense" for the Illinois Central the resulting dollar totals represent the range within which total excess compensation for all Class I lines is likely to fall.

The following represents the dollar values of the "excess expense" for all Class I roads when the reciprocal of the above percentages is multiplied against the total of the excess expenses for the year 1960 for the Illinois Central Railroad ($11,677,161). Table XVIII demonstrates

TABLE XVIII

PROJECTION OF CASE STUDY FINDINGS TO ALL CLASS I RAILROADS

Year 1960

(Thousands of Dollars)

Areas of Comparison	All Class I Railroads	Illinois Central Railroad	Percent Illinois Central of All Class I	Projection* Factor	Excess Expense Attributed to Work Rules for All Class I RR
Total Operating Revenue	$9 514 294	$260 225	2.735	36.563	$426 952 038
Total Operating Expense	8 930 278	211 149	2.364	42.301	493 955 587
Total Compensation of Road Employees	878 188	22 386	2.549	39.231	458 106 703
Freight Revenue	8 025 423	209 461	2.609	38.329	447 573 904
Average Number of Road Employees	101 398 empl.	2 502 empl.	2.468	40 519	473 146 886
Average Excess Compensation					459 947 003
Per Cent of Total Operating Expenses	5.15	5.53			
Per Cent Increase in Net Railway Operating Income After Elimination of Excess Expense	44.06				

*This factor is the reciprocal of the percentage figure in the preceding column and is multiplied in each case against the excess compensation computed for the Illinois Central, $11,677,161.

these computations in more detail.

Total operating revenue	$426 952 038
Total operating expense	493 955 587
Total compensation of road employ ..	458 106 703
Average number of road employees ..	473 146 886
Freight revenue	447 573 904

Using the above five bases of comparison it would appear that the "excess expense" attributed to "make-work" rules for all Class I railroads would lie somewhere between 427 million dollars and 494 million dollars. The statistical mean is very close to 460 million dollars[2] but it should be emphasized that this is only a measure of central tendency. Neither this figure nor any of the figures representing individual areas of comparison should be regarded as final, precise statements of the "excess" compensation attributed to certain working rules. To establish statistical validity would require considerably more than one railroad and one year. Such an investigation would add little in the way of further illumination for the purposes of this study. The projection provides only a very general idea of how the costs would appear when translated from the

---

[2] $459,947,003 .

Illinois Central to the entire industry. This is sufficient, however, to provide a reasonably confident substantiation of the railroads' claim that the rules are costing them about $500 million annually. Although the validity of the "featherbedding" charges are still to be analyzed, it appears that the unrealistic character of some working rules have created an additional burden of expense to American railroads amounting to some half-billion dollars per year. This amounts to slightly over five (5.15) per cent of total operating expenses, but when eliminated it results in an increase of 44.06 per cent in net railway operating income.[3] Consequently the rate of return on net investment after depreciation would increase for the year 1960 from 2.13 per cent to 3.81 per cent, a level of return which was last attained in 1956.[4]

It should be re-emphasized that all of these computations reflecting the effect of the excess compensation of

---

[3]All computations are based on the mean of $459,947,003.

[4]Net railway operating income is computed after taxes but before fixed charges such as "interest on funded and unfunded debt."

railroad revenue are based on the statistical mean with its associated qualifications. Nevertheless the figures reflect the general effect such compensation had on railroad revenue in 1960. Rather broad implications may be deduced from these results but it should be clear that removal of the expense is only a very partial answer to the railroads' financial problems. A return on net investment in the vicinity of three and three-quarters per cent is not likely to be construed as a healthy financial condition. More important, perhaps, are the questions which surround the basic assumptions of "make-work" and which underlie the entire analysis. These assumptions are by no means universally accepted and if they possess a dubious quality then the value of the calculations as a means of suggesting possible modifications in working rules would be seriously impaired. The following is thus an effort to explore the validity of these assumptions.

Evaluations

There is considerable divergence of opinion as to how and when a legitimate working rule becomes a "make-work" rule. This is apparent from even a cursory examination of

the statements made by the rail managements and the labor organizations in their published literature. Evidence of the contrasting views is equally pronounced in the Report of the Presidential Railroad Commission released early in 1962.[5] The following evaluations will utilize this Report as well as the author's interviews and observations. Each of the major work rules previously defined as having "make-work" characteristics will be analyzed in turn.

The dual basis of pay system. The most vexing problem to be faced when analyzing working rules is concerned with methods of compensation. The heart of the compensation structure is the dual basis system of payment for road service employees--that is, a system which requires consideration of both miles run and hours of service. It is a system in which the miles operated over the daily minimum are paid for on a pro-rata basis while overtime is paid for on a "speed basis." One aspect of this dual system which makes problems associated with it so vexatious is its great complexity. Considerable confusion may result when

---

[5] Report of the Presidential Railroad Commission, A report prepared by the Commission established by Executive Order No. 10891, November 1, 1960 (Washington: Government Printing Office, February 1962).

an attempt is made to relate the mileage basis of pay to the speed basis for overtime.

A simplified example may help to illustrate the difficulty. Assume an engineer is employed in through freight service which has a basic day of eight hours and a mileage standard of one hundred miles. The engineer is guaranteed a full day's pay for any mileage he runs up to the basic minimum. Thus, if he runs sixty miles in one hour or in eight hours he would receive the basic day's pay. In the event he runs more than one hundred miles, e.g., 125 miles within eight hours, he receives the basic day's pay plus an additional one-fourth of this pay as the pro-rata mileage allowance. If he completes the 125 mile run in ten hours it would at first appear that he is entitled to overtime. Overtime, however, is computed on a "speed basis." Speed bases are calculated by dividing the basic miles by the basic hours, in this case by dividing one hundred miles by eight hours. This results in a speed basis of twelve and one-half miles per hour. Under these conditions the engineer would receive no overtime for completing a run of 125 miles in ten hours; he has exactly performed according to the speed basis. On the other hand, if he completed the same

run in eleven hours his speed would have fallen below the average of twelve and one-half miles per hour and he would be entitled to one hour overtime, in this case at 3/16ths of the daily rate, or, expressed in another way, at time and one-half.

The above example is adequate to illustrate the complexity of the wage structure but it should be kept in mind that the difficulty is magnified when different classes of service are considered. Unfortunately, the incomparable obtuseness of the structure tends to obscure the inequities which exist within it. These inequities take many forms; for example: one engineer travels twenty-five miles in an hour and receives a day's pay. Another travels one hundred miles in eight hours and receives the same day's pay; while still another completes his hundred miles in two hours and is similarly compensated. Or, as regards overtime, one engineer completes a 125 mile run in ten hours and receives only the pro rata mileage share for the extra twenty-five miles while another engineer fails to meet his schedule, possibly through his own fault, and completes his run in eleven hours and receives not only the pro rata mileage allowance but an additional hour's pay and at premium rates

in the bargain. These are but two examples of a number of such disparities. The Presidential Commission report has summed up the problem in the following manner:

> The conclusion is that the present disparity in hours on duty--some unduly short and others excessively long--is unconscionable; the speed basis of overtime is an anachronism involving inconsistencies among types of runs; the dual basis of pay contains widespread anomalies and inequities . . . the pay rules are complex, and with many components to compensation, they contribute to disputes. In short, the word which best describes the compensation structure is a mess.[6]

The worst aspect of this is that it greatly complicates any attempt to analyze the compensation system with a view to improvement.

There are two separate and very broad approaches to the problem. First, it is possible to substitute an hourly wage structure for the dual hours-miles method now employed. Secondly, the present system may simply be modified to provide more realistic bases for payment. The first solution is the easiest one but also the least logical. Road train crews do not operate in an environment which is conducive to the hourly wage method. There are marked differences in the kinds and lengths of service and in the degree of difficulty encountered on various runs. The present piece-rate

---

[6] Ibid., p. 241.

system recognizes these differences and from the standpoint of equity the system should probably be retained. It thus appears that the most reasonable and logical approach to the current problems would be to modify the present structure in such a way as to remove wage inequities and abolish payment for work not performed. The latter constitutes the approach of the railroads.

The carriers' proposals indicate they would like to increase the number of miles which make up the basic day from 100 to 160 in through freight service (and for enginemen in passenger service) and from 150 to 225 miles for trainmen in passenger service. The effect is to reduce the mileage rates of pay in the first instance by 37.5 per cent and by 33.3 per cent in the latter case. In addition the carriers propose to eliminate overtime in all passenger service.[7]

The labor organizations, on the other hand, propose no increases in mileage but rather reductions in the basic day. These reductions consist for the most part of six in place of eight hours in through freight service (and for

---

[7] Ibid., pp. 186-189.

trainmen in passenger service) and four hours in place of five hours in passenger enginemen service. They also favor abandoning the speed basis for overtime and the substitution of premium payment for any time served over the basic day.[8] The organizations' proposals would result in significantly greater labor costs without at the same time offering any solutions to the general problem.

These proposals present an improper springboard from which to attack the overall problem. The carrier's proposals also may represent rather dubious bases from which to approach the trouble. On reflection, their main contribution toward a solution lies in the suggestion to increase the basic mileage, ostensibly in order to modernize the structure in keeping with the technological advances in the industry. A number of questions arise regarding the actual effects of such a proposal. First, will increasing the mileage bases result in the abolition of or a significant reduction in the inequities mentioned? The mere substitution of 160 miles for 100 miles in the examples already given will not change the structure itself which seems to

---

[8] Ibid., p. 188-189.

be the chief source of the inequities. As the Commission has suggested,[9] these inequities may continue to be tolerated because of the seniority system and because they are frequently intercraft in nature. The elimination of them would require a virtually complete overhaul of the existing compensation structure, something not yet contemplated by the carriers.

Aside from the disparities remaining in the system, the proposals leave other important questions unanswered. The most obvious and significant question is: Will the railroads' financial position be materially enhanced by the proposed changes?

An analysis of the above question may be approached on the basis of two different assumptions. The first may assume that divisional points are to be changed in conformity with the new mileage bases, while the second assumption implies that the divisional points will remain as they now are. In the former case, divisions would be so constructed as to permit crew changes at distances of approximately 160 miles rather than 100 miles. The labor cost saving under these conditions would depend to a

---

[9] Ibid., p. 241.

considerable extent on the carriers' ability to actually establish such divisions. A recent study reveals that they have been astonishingly unsuccessful so far in relating their crew changes to the mileage basis. This study is summarized in part below. It applies only to engineers in through freight service:[10]

Number of miles run	Number of trips	Per cent of total
60 and under	30	1.45
61-80	166	8.05
81-100	330	16.02
Total 0-100	526	25.52
101-160	1357	65.90
160 and over	176	8.58
Total	2059	100.00

The remainder of the study involving other classifications reveals essentially the same pattern.

It is clear that the predominant number of runs (65.90 per cent) are already between 100 and 160 miles in length. It is equally clear that the railroads, faced with the choice of reducing crews and paying pro rata mileage allowances or retaining the same number of crews and changing them at approximately 100 mile intervals, have made the

---

[10] Ibid., p. 180. This is a study of thirty-one selected railroads from July 1, 1060 to December 31, 1960.

former choice. Presumably the choice is an economically prudent one, that is; it is less expensive to have fewer crews and pay pro rata mileage to the crews retained.

All of the mileage pro rata now being paid on runs between 100 and 160 miles would be saved if the carriers are successful in changing the basis as proposed. It is impossible with existing data to say exactly how much would actually be saved for all Class I roads but it should not be inferred that it would be 65.90 per cent of the total compensation now being paid engineers in through freight service. The exact amount could only be obtained by cumulating the total dollars of pro rata actually paid in the period for each individual run. The study under contemplation has categorized the trips into mileage blocks, while in actual practice the runs could be any length between 101 and 160 miles. Nevertheless, it is apparent that most of the runs already exceed the present mileage basis and considerable savings could result from the extension of the basis by another sixty miles.

One interesting aspect of the above study is the fact that divisions are currently little related to the mileage bases. It is apparent from the table that slightly more

than one-fifth of the runs are quite near the 100 mile standard with nearly ten per cent less than eighty-one miles and roughly three-fourths of the runs over one hundred miles. Thus, there are at least prima facie grounds upon which to conclude that divisions have arisen out of considerations other than mileage standards of compensation. These other considerations probably include the location of existing towns or cities which grew up without regard to the mileage bases of railroads although some towns clearly came into being because they had been nominated as railroad division points. For whatever the reason, it seems clear that other considerations than distance have been compelling in most cases involving the length of runs and crew changes.

In view of this situation there seems to be little reason to believe that there will be any significant shuffling of crew-change points. This conclusion was generally confirmed by one highly placed railroad official interviewed by the writer. He observed that it was impractical to assume that the railroads could take some sort of mileage ruler and lay out division and change points every 160 miles. He implied that conditions peculiar to nearly every individual run has dictated the selection of these locations and not

the mileage standard. The net result is the creation of an awareness that no important savings may be predicted on the basis of substantial reduction in complete crew units as a result of the modernization of the mileage basis.

The main saving to be realized from an extension of the standard is to be found in the abolition of the pro rata compensation now being paid on runs from 101-160 miles. All runs up to one hundred miles in length would continue to receive the guaranteed day's pay. The entire proposal is thus reduced to an effort to lower the piece-rate (mileage rate) by 37.5 per cent through freight service (and engineers in passenger service) and 33.3 per cent for trainmen in passenger service.

Little fault may be found with the proposed new speed basis itself as it appears to accurately reflect present technological conditions in the industry.[11] The primary aspect of the railroads' proposals which might subject them

---

[11]A study performed by the Presidential Commission indicates that through freight speeds average about 23.2 miles per hour and passenger speeds about 38.5 miles per hour. Ibid., p. 223. Also see: Appendix D. This is a study of a typical coal run on the Illinois Central selected because it is one of the slower freight runs.

to criticism, however, is the fact that they do not go to the heart of the problem. The crux of the difficulty seemingly originates in the fact that efficient railroad operations apparently require that runs of greatly varying length be made with the same crew. It is the numerous very short runs which give rise to payment for work not performed (through daily guarantees) and it is the very long runs which give rise to excessive daily compensation for some crews. Both result in marked inequities in total compensation for work actually done and encourage charges of "featherbedding." It would seem to follow from this analysis that fundamental changes in the dual basis of payment structure are called for. The carrier proposals do not contemplate these kind of changes at the present time.

Recommendations made by the 1962 Presidential Commission include efforts to remedy the most obvious of the dual system's shortcomings. In brief, two major changes are suggested. The first deals with the problem of the very short run--that is, runs up to one hundred miles. These runs would be treated as "local freight" and paid for on a strict hourly basis as is done currently in yard service. This would correct the inequity of the guaranteed daily wage.

The Commission reports that more than half of the local freight runs fall into this category so that substantial savings are indicated. The second recommended change provides for the substitution of miles plus hours for miles or hours in the new dual system proposed. Under this method, hourly pay and mileage rates could be bargained for separately. The mileage rate would not be obtained by dividing the daily rate by the mileage standard as at present. This would introduce flexibility into the structure since hours could be emphasized in those situations where hours are the more equitable basis of pay and mileage rates would be given greater importance in the areas indicated.

Under this system overtime based on speed could be eliminated and, instead, paid for after eight hours at premium rates. Mileage run beyond the 160 mile standard indicated by the Commission would be additionally compensated for at an "overmile" rate which is recommended to be one and one-half times the negotiated mileage rate. Excess hours due to slowdowns and stoppages of one kind or another would be compensated for at the customary premium overtime while longer hours due to excess mileage and/or slowdowns and stoppages would be additionally paid for at the "overmile"

rate. The purpose of the dual treatment of overtime is to introduce selectivity into the system and thus provide for a more equitable compensation system from the viewpoint of both sides.[12]

While the Presidential Commission's recommendations as above described go far beyond the proposals of either the carriers or the organizations in reducing inequities created by the old system it continues to rely on the extension in the mileage standard as proposed by the railroads for financial relief. This is clearly revealed from the example used by the Commission as an aid in explaining the proposed new structure. In this example, which assumes an engineer in through freight service, a 180 miles, ten hour run would result in a payment of $46.34.[13]

Hours:	Basic Pay (8 hrs. x $3.1925).....	$25.53
	Overtime (2 x $4.787)	9.57
Miles:	Mileage Rate (60 x $.12485).....	7.49
	Overmileage Rate (20 x $.18728)....	3.75
	Total	$46.34

It should be pointed out that the $0.12485 mileage rate used in the above example for mileage between 100-160 miles is only a suggested rate (actually one-half of the current mileage rate) and would be negotiated. Under the

---

[12] Ibid., pp. 242-245.

[13] Ibid., p. 246.

present system the compensation for this run would be as follows:

Hours:	Basic Pay (8 hrs. x $3.1925)	$25.53
	Overtime	---
Miles:	Mileage Rate (80 x .2553)	20.06
	Total	$45.59

The main reason for the smaller total under the existing structure than under the Commission's proposed structure is that no overtime would commence on a run of 180 miles at present until after twelve hours and forty-eight minutes had elapsed. Under the compensation bases proposed by the carriers the pay for this run would be as indicated below:

Hours:	Basic Pay (8 hrs. x $3.1925)	$25.53
	Overtime (1 hr. x $4.7897)	4.79
Miles:	Mileage Rate (20 x $.1596)	3.19
	Total	$33.51

The speed basis for overtime under the new proposal of the railroads is twenty miles per hour and thus one hour of overtime would be paid for at premium rates in the above example.

It is apparent from the above analysis that no savings would accrue to the railroads from runs in excess of

the eight hour daily standard if the Commission's proposals were adopted. This is primarily due to the increased emphasis on the premium treatment of extra long runs and excessive hours. Savings remain, however, with respect to runs between 100 and 160 miles assuming the negotiated mileage rate were reduced by one-half as has been assumed by the Commission in their example referred to above. The savings could be substantial since about two-thirds of the present runs are indicated to be in this range Some of the savings might be offset by the more liberal treatment of overtime, however.

The carrier's proposal would result in substantially greater savings than that of the Commission inasmuch as it proposes to reduce the mileage rates on the average between one-third and 37.5 per cent. No savings would accrue on runs shorter than one hundred miles since the basic day's compensation continues to be guaranteed and the savings obtained from runs between 100 and 160 miles would be offset in some degree by additional overtime payment resulting, in this case, from the increased speed bases. Conclusions regarding the overall effect of these rules and their proposed changes are reserved to the final chapter.

Consist of road crews. While some doubt tends to obscure the public's image of "featherbedding" in connection with the compensation structure evaluated above, there appears to be little of this dubious quality in its view of the makeup of railroad crews, particularly that of the fireman on diesel locomotives. Part of the doubt associated with the pay structure is unquestionably due to the general lack of understanding of how the system works. This cannot be said of the manning structure, however. It is obvious that there is no work for firemen to perform on an engine where there are no fires to attend (although there are indeed fires as anyone can testify who has walked through the narrow passageways of enginerooms while traveling nearly one hundred miles per hour). Thus the consist question is generally regarded as the clearest example of "make-work" on the railroads. A brief evaluation of the work status of firemen follows:

The labor organizations have contended for some time that the fireman does, in fact, perform several useful and necessary functions. These functions may reasonably be grouped as follows: (1) the lookout function, (2) the

mechanical function and, (3) the engineer relief function.[14] Before proceeding to analyze these functions it should be recalled from previous discussions that the carriers have never seriously proposed the elimination of the fireman on passenger trains and for this reason the analysis is confined to through and local freight service. It was clear to the author, although the limited nature of the trip experiences is readily acknowledged, that the "so-called" "headend" brakeman was nearly always in the cab of the locomotive along with the fireman and engineer. In the absence of a fireman he could logically perform any lookout function that is required. The need for a left-side lookout would appear to be more urgent in local freight service where more switching activity occurs.

With respect to the safety factor, prudence dictates that any and all persons or devices available should be utilized to reduce hazards. This view has been summarized by one of the Commissioners as follows:

> He alone is able to see what is transpiring on the left side of the train. When the engineer is looking forward or backward, the fireman is looking in the opposite direction to see what obstacles, if

---

[14] An excellent discussion of these functions may be found in the Presidential Commission's Report, Ibid., pp. 66-79.

> any, are in the path of the train. Thus the fireman must look for pedestrian and vehicular traffic at or approaching grade crossings, signal indications, conditions of the right of way, obstructions on the track, ground men, including repair crews, as well as unauthorized persons and children playing along the tracks.[15]

The author was present at a preview of a movie which was later used as a carrier exhibit before the Presidential Commission and which tended to vitiate most of the safety claims made by the organizations. The movie depicted a train on a standard run which was manned by only an engineer and front-end, left-riding brakeman and a rear-end conductor. The actual conditions encountered on the trip indicated that the safety factor was in close control with this consist.

The second function frequently referred to by the organizations as being necessarily performed by the fireman is concerned with moving malfunctions of a mechanical nature. There is a considerable difference of opinion as to the frequency of engine room "alarms" or other evidence of malfunctions and to the ability of the fireman to correct these conditions when they do occur. The Commission

---

[15]Dissenting Report of Commissioner S. C. Phillips, Ibid., pp. 356-7.

concluded that they "involve a small proportion of the total time on duty, are relatively minor, and are not essential to safe operation. The infrequent minor malfunctions which do occur can be handled by the engineer. If they are more serious the services of skilled maintenance personnel called to handle the emergency will still be required, as at present."[16]

The third function ostensibly performed by the fireman is the relief of the engineer in the event of the death or disability of the engineer when the train is in motion. Evidence indicates that the incidence of such occurrences is quite low and it is also apparent that any crewman is capable of bringing the train to a halt.

From the very brief analysis of the function of the fireman on freight diesel locomotives one might well conclude that the classification cannot continue to be justified. The Commission was of this view and recommended that firemen be assigned only at the railroads' discretion after July 1, 1962. This is equivalent to recommending that firemen be used only on passenger locomotives after that date.

---

[16] Ibid., p. 77.

It further recommended that firemen hired since the carriers' notice in 1959 be relieved of duty after October, 1962, and all firemen under the age of twenty-five be separated after July 1, 1962. Firemen with less than ten years service should be furloughed after July 1, 1963, according to this same recommendation.

Protection of seniority and other rights for all terminated firemen are recommended, including a separation guarantee of sixty per cent of his last year's average monthly compensation for up to thirty-six months (for ten years' service) after separation. While the Commission's proposals appear reasonable, assuming the need to abolish the position, the question of the extent of its financial effect on railroad revenue remains largely unanswered. Estimates might be made, and have been made in the case study, of the savings which could accrue through the complete abandonment of the fireman position in freight service.[17] This assumes, however, that all existing freight firemen would

---

[17]The 1960 savings using the statistical mean used in the projection would have been $103,646,345 or approximately one hundred million dollars annually.

be terminated at a given time, an assumption which is probably invalid. First of all, seniority would likely result in "bumping" down, that is, the replacement of firemen into lower rated jobs, possibly yard jobs. In these cases the savings would be made at the lower rate rather than at the existing fireman rate. Secondly, strong pressures from organized labor and possibly government agencies would probably militate against any rapid or wholesale separations from the service. Such was the Canadian experience. Thus, the most likely result of negotiations would not leave the issue at the complete discretion of railroad management. Transfers into lower-rated jobs and scheduled removal of firemen over relatively long periods of time coupled with suggested terminal pay extended over months or even years would greatly diminish the estimated savings. There is no reasonable method whereby this figure could even be approximated on an ad hoc basis. Conclusions are discussed in the final chapter.

Minor rules regarding compensation. The remainder of the working rules that have come under attention throughout this study may be treated under one heading, not because

they are unimportant or readily soluble but because they represent a relatively minor saving when compared with the dual basis system of pay and consist of crews question. The most important of these rules are the arbitraries or constructive allowances now being paid for work which is particularly difficult or arduous, or for certain delays. The carriers have proposed to eliminate all such rules which would come into conflict with a mileage or daily guarantee. The organizations wish to retain them but convert them from money or mileage payments to hours of pay. For example, instead of a flat fifty cents for coupling air hose, the actual time required in the coupling would be paid for at the crewman's going rate.

The Commission has recommended that certain switching arbitraries be eliminated, namely: (a) initial terminal, (b) intermediate yard, and (c) final terminal switching. Initial and final terminal delay rules would be eliminated as a result of this recommendation but only in local freight service where regular hourly rates would prevail anyway.[18] In general the Commission feels that simplifications of the

---

[18]Presidential Commission, op. cit., p. 255.

present complex structure might be the most important result of modification of the arbitraries.

The second most significant of the minor rules, at least from the expense standpoint, are the graduated rate scales based on engine weight or number of cars hauled. The carriers have proposed a single rate which would be the average rate now being paid. The Commission proposes a combined "weight on drivers or units plus car length brackets."[19] This would have the advantage of leaving the total earnings in this respect largely unaffected for individual crew members. The carrier proposal would not change the total compensation effect but could result in considerable variations in individual pay rates.

The financial effect of modification of these minor working rules on rail revenues is exceedingly difficult to estimate unless it be proposed they be done away with altogether; that is, abolition of all delay pay, deadheading compensation and the reduction of graduated rate scales to the negotiated daily rate. These were the assumptions used in computing the total excess expense attributed to these working rules in the case study. On that basis and from

---

[19] Ibid., p. 254.

the results obtained from the study the total savings to all Class I railroads would be in the neighborhood of fifty million dollars annually.[20] There is no reason to expect that these rules would be or could be abolished, however, without recourse to some substitute such as additional hourly compensation. These possibilities will be discussed in the concluding chapter.

---

[20]The actual amount using the statistical mean is $46,380,196.

CHAPTER VI

SUMMARY AND CONCLUSIONS

This study has proceeded on the assumption that the nation's railroads are in a state of financial decline serious enough to warrant intensive investigation into the causes of the difficulty. It is anticipated that such investigations may form the bases for remedial action. In recognition of the unusual complexity of the many problems associated with the railroads' failing financial health, the study has been limited to one facet of the overall problem, that of the troubled area of labor costs most frequently referred to as "featherbedding."

Having established the fact of the railroads' financial difficulties in the early chapters, succeeding chapters have (a) analyzed the structure and character of those working rules generally alleged to contain "make-work" characteristics, (b) reported the findings of the case study of a representative railroad and projected these findings to all Class I roads, and (c) evaluated the rules and their

financial effects on railroad revenue through a review of various proposals for remedy. The remainder of this chapter will consist of a very brief summary of the findings of the study followed by the conclusions drawn from them.

Summary of Findings

A review of statistical data reported by the Interstate Commerce Commission on a monthly and annual basis and from some secondary sources confirmed in Chapter II the original assumption that the nation's railroads have been in a very unfortunate financial position for some time. The study has attempted to analyze briefly the multiple forces which have given rise to the difficulty in order to reveal the unusual complexity of the railroads' problems. The conclusion was drawn that forces outside of railroad managements' discretion were probably primarily responsible for the trouble. The most fundamental of these forces have been changes in technology, in the demand for railroad services, and severe competition from other transportation agencies, particularly the trucking industry.

After entering the decade under study in an undesirable financial position, the railroads found themselves

by the close of 1960 in a virtually untenable situation. Total revenue for all Class I roads was down well over one billion dollars below the high point of the decade which occurred in 1953. Net railway operating income was only approximately three-fifths of the average for the decade by the end of the period. Freight revenues declined about twelve per cent over the period while passenger revenues dropped even more noticeably, nearly forty per cent. This all occurred in spite of numerous rate increases which tended to offset somewhat the loss of traffic. Rate increases have proved to be of dubious benefit, however, since they have frequently resulted in demand-substitution for the services offered by the railroads. A study of the recent financial history of the Illinois Central Railroad, which was the source of the case study, revealed a similar pattern.

While there is undoubtedly some merit to the Organization charges that the railroads have been slow to apply remedial action, in general it may be concluded that they have applied technological gains to the industry about as fast as their inadequate financial structure would permit. The result has been notable improvement in service at lower

unit costs. In spite of these gains traffic has continued to move from the railroads to other modes of carriage resulting in considerable excess capacity and a continuing decline in the industry's financial strength.

Apparently unable to solve their problems through the acquisition of additional traffic the railroads have concentrated a part of their attention on reducing costs. One area which has given promise of significant cost reduction is that dealing with certain working rules which, because of the technological achievements in the industry, appear to contain "make-work" characteristics. It has been the purpose of this study to analyze these rules in an effort to determine (a) the reasonableness of the "featherbedding" charges directed against them, and (b) the quantitative significance of the costs associated with them.

One of the prime difficulties which has surrounded any attempt to study railroad costs is the fact that the figures have been generally unavailable, at least in a form which would permit a close analysis of particular costs. In order to overcome this problem a rather detailed study was made of a representative railroad, the Illinois Central System. The analysis was confined to road service employees

and involved costs relating to five specific areas of existing working rules.

Taken in order the study revealed (a) the dual basis of compensation as established some forty years ago is unrealistic in light of technological changes which have occurred since then, particularly as regards the speed bases used in computing the payments. Two different methods were utilized in approaching the problem of excess compensation resulting from the dualistic nature of the structure and the outmoded speed bases. First, the compensation was computed on a straight hourly wage basis. Admittedly, this would make for an inequitable wage structure, but it was calculated because of the widespread belief that road service employees can be paid on such a basis. The second approach to the computation of excess wage payments was to retain the basic structure of both hours and mileage but to substitute the actual average speed for the contractual speed bases established many years ago. The decade 1951-60 was studied mainly to make certain that the most recent year, 1960, was closely representative. The two different approaches to the calculations revealed similar results and were averaged in order to produce a single amount which was used in a

later summation. On the above basis the excess compensation that could be attributed to the current wage structure on the Illinois Central Railroad for 1960 was nearly five million dollars.

(b) The second major set of rules which was investigated was that dealing with the consist, or make-up, of road crews. The most obvious example is that of the fireman on diesel locomotives. The term "fireman" is itself misleading since no firing duties are required. The title "fireman-helper" is now in common usage for the classification and it tends to emphasize the new role of the fireman which is mainly that of rendering assistance to the engineer. It has been generally recommended for safety reasons that he remain on the passenger engine but not on the freight locomotive. Assuming that the freight fireman position were abolished, a total of about two and one-half million dollars could be saved annually on the Illinois Central. The case of the excess brakeman is far from clear but most rail authorities have argued that one of the two brakemen found on most trains (three in full-crew states) may be eliminated without seriously impairing either safety or efficiency. On this assumption the study arbitrarily reduced

the compensation of brakemen by one-half. Thus, by reducing freight crews to an engineer, brakeman and conductor, and passenger crews to an engineer, fireman, baggageman, one brakeman and a conductor, slightly over five and one-half million dollars in compensation would have been eliminated from the total paid by the railroad in 1960. This represented about one-fourth of the total compensation for road service employees. It should be carefully noted, however, that all savings would not accrue to the railroad because of the necessity of providing additional safety devices, such as "dead man switches" and "walkie-talkie" radio equipment.

(c) The remaining three working rule areas studied, which were (1) arbitraries or constructive allowances, (2) payments due to graduated rate scales, and (3) monthly guarantees, when calculated amounted to somewhat over one million dollars annually. This was roughly ten per cent of the eleven and one-half million dollar total related to these working rules for the year. The figure is approximately one-half of total road service compensation on the Railroad for 1960.

One hoped for result of making a detailed study of a representative railroad was additional insight into the

financial effects the rules have had on the revenue of all Class I railroads through a projection of the findings. In the preceding chapter the statistical validity of such a projection was established, primarily on an a-priori basis. Five areas of comparison were studied and projections made on the basis of each. Total excess expense for all roads was then estimated to be somewhere between 427 million dollars and 494 million dollars. For analytical purposes a statistical mean was developed which indicated that a rough approximation of the expense associated with these rules is 460 million dollars, a figure which tends to support mathematically the railroads' allegation that the rules cost them a half-billion dollars annually.

Essential to the usefulness of the study, however, is the determination of whether or not the rules do consist of "featherbedding" techniques and, assuming they do, may they be modified in such a way as to provide the financial remedy which the carriers seek? The previous chapter has evaluated the rules with a view to analyzing them in terms of possible solutions. A very recent and thorough report by the Presidential Railroad Commission has evaluated the rules and offered recommendations for solving the

problems associated with them. This very important study was utilized along with the present investigation in arriving at the conclusions which follow.

Conclusions

From the foregoing it now appears certain that the costs associated with "make-work" rules, as defined by the railroads, are significant enough to have important effects on rail net revenue. It should be noted, however, that a rather loose interpretation has been put on the term "make-work." If the definition is restricted to "payment for work not actually performed or for unnecessary work," the dual basis of pay system, deadheading, necessary and unavoidable delay and graduated rate scales may not logically be referred to as "make-work" or "featherbedding." Thus, although the compensation structure in general does not possess any significant "make-work" characteristics, it is badly outdated, unnecessarily complex, and piece-meal in nature.

Taken individually it appears that the main complaint regarding the compensation structure is that the speed bases are so technologically outdated that they result in grossly excessive payments. A second, yet still

significant, criticism is directed at the payment of numerous special allowances (arbitraries) for work which the railroads feel should be performed as a normal part of the crewman's duties. The key to an answer to these criticisms may be found in another question: Do unions negotiate for hourly or daily wages or for annual compensation? Ostensibly they negotiate for the former but it is the latter which they find compelling. In some industries which may have very stable and routine work assignments the question may well be moot. In the railroad industry and for road crews in particular the question is vital. Road service does not operate on an eight-hour day, five-day week. Thus while individual rules may appear to result in unreasonable and excessive compensation, it is the entire income a worker makes in a year that counts. When the perspective is total rather than partial very different conclusions may be drawn. For example, while all railroad employees averaged $5,659.68 in 1960, auto workers averaged $6,146.40, blast furnace and basic steel averaged $6,034.76 and petroleum refining averaged $6,407.44 (see Appendix E for details and source). This is for all non-supervisory employees and, of course, does not accurately reflect the annual earnings by individual

classification. The difficulty in attempting to show the latter is that there is no reasonable way to compare a railroad engineer with a brickmason in a petroleum refinery or a hot-mill operator in a steel mill. The natures of the jobs are too varied to render valid comparisons but it seems safe to assume that all industries have these highly-rated jobs which call for unusual skill or involve considerable responsibility. The high hourly rates ascribed to some railroad crewmen, particularly enginemen and conductors on passenger service, are the result of dividing total annual compensation by the straight time hours actually worked. But this is no different than the high rates which would result from the same method being applied to, say, a hot-mill operator in a steel mill who makes thirty-eight dollars a day but works only four hours each day because of the nature of the work which is unique to his industry. Thus, if the incomes of road service employees on the nation's railroads are not significantly higher than incomes for comparable occupations in other heavy equipment industries fault will have to be found with none or all.

None of the above is intended to imply that the compensation structure of the railroads is not badly in need of

revision. The conclusion is, however, that while modernization and modification will result in a sounder and more equitable structure, they are not likely to greatly reduce labor costs. It does not appear likely that the labor organizations will negotiate away a portion of their annual income when it cannot be shown by existing data that the income is itself excessive. To force such a decision on them by legislative action would be equivalent to asking a particular group of railroad workers to subsidize the industry through the sacrifice of a portion of what now appears to be a reasonable annual income.

The consist of crews question is quite another matter. If the firemen on freight diesel engines and one of the brakemen on all trains perform no necessary function then a clear case of "make-work" is demonstrated. This belief is mainly predicated on the reductio ad absurdum argument. That is, there are no fires to tend nor brakes to set. This argument is not to be disdained but there are important questions of safety to lives and the protection of expensive equipment and merchandise. Solutions to these questions, however, are based on value-judgment, and the problem does not lend itself to economic analysis. There are further

significant questions of what to do about the thousands of men who would become unemployed if the positions were abolished. It is reasonable to assume that they are entitled to at least transitional economic security, but how much and for how long? For the purposes of this study the important phase of these questions lies in the effect continued costs will have on railroad net revenue. A program of partial pay extending over several years to terminated employees would offset a large portion of the expected savings. The revenue problems of the railroads seem to be a "here and now" situation--at least for some. Railroad officials interviewed privately expressed their fear that the anticipated victory on the consist question may turn out to be largely meaningless to many roads which are on the borderline of bankruptcy and need immediate help.

In final summary it may be concluded that while the compensation structure is badly outdated and unnecessarily complex, actual cost savings will only partially accrue as a result of modification of the structure. Very significant savings would only come about at the expense of seriously diminishing the annual income of the employees concerned--income which is not at present grossly excessive

when compared to similar industries. Thus nearly one-half of the proposed half-billion dollar annual savings may be more mythical than real. Added to the generally gloomy outlook for the carriers is the fact that the savings associated with the abolishment of certain crew positions will only be partial, at least for a period of a few years. This analysis suggests that in place of a saving of some 500 million dollars annually, a rather optimistic estimate might place the figure at closer to 150 million dollars assuming successful negotiations on the part of the railroads.

It is to be expected that the above figure will represent only token relief for the carriers at best and should not be considered a panacea for the railroads' financial problems. Nevertheless, there is urgent need for a beginning to the solution to these problems. Negotiations commencing immediately and carried on in good faith would go far toward convincing the public that both the railroads and the rail Brotherhoods are sincerely and vitally concerned with the preservation of the nation's most important mode of transportation. Much can be achieved by (a) altering the compensation structure in such a way as to provide realistic and comprehensible bases for payment, and (b)

reviewing the entire manning requirements for trains. In the first instance an upward revision in wage scales may be necessary to maintain an equitable income structure. In the second case it will be necessary, in all justice, to provide some economic security for those crewmen whose jobs are abolished. Above all, it is necessary to understand that:

> The troubles in our transportation system are deep; and no just and comprehensive set of goals--which meets all the needs of each mode of transportation as well as shippers, consumers, taxpayers and the general public--can be quickly or easily reached. But few areas of public concern are more basic to our progress as a nation . . . The difficulty and the complexity of these basic troubles will not correct themselves with the mere passage of time. On the contrary, we cannot afford to delay further. Facing up to the realities of the situation, we must begin to make the painful decisions necessary to providing the transportation system required by the United States of today and tomorrow.[1]

---

[1]John F. Kennedy, Message from the President of the United States Relative to the Transportation System of Our Nation, House Document No. 384, 87th Cong., 2nd. Sess. (Washington: Government Printing Office, April 5, 1962), p. 17

SELECTED BIBLIOGRAPHY

A. BOOKS

Brill, Daniel H. Financing Capital Formation. Princeton: Princeton University Press, 1957. Pp. ix + 497.

Haber, William, et al. Maintenance of Way Employees on U. S. Railroads. Detroit: Brotherhood of Maintenance of Way Employees, 1957. Pp. 237.

Horowitz, Morris A. Manpower Utilization in the Railroad Industry. Boston: Northeastern University Bureau of Business and Economic Research, 1960. Pp. 176.

Johnson, Emory R. Government Regulation of Transportation. New York: D. Appleton-Century Co., 1938. Pp. xiv + 680.

Jones, Harry E. Railroad Wages and Labor Relations, 1900-1952: A Historical Survey and Summary of Results. New York: Bureau of Information of the Eastern Rail-Roads, 1953. Pp. viii + 351.

Kaufman, Jacob J. Collective Bargaining in the Railroad Industry. New York: King's Crown Press, Columbia University, 1954. Pp. x + 235.

Lecht, Leonard A. Experience Under Railway Labor Legislation. New York: Columbia University Press, 1955. Pp. viii + 254.

Locklin, D. Phillip Economics of Transportation. Fifth edition. Homewood, Illinois: Richard D. Irwin, 1960. Pp. x + 863.

McNaughton, Wayne L. and Joseph Lazar Industrial Relations and the Government. New York: McGraw-Hill Book Company, 1954. Pp. xii + 287.

Meyer, John R., et al. Competition in the Transportation Industry. Cambridge: Harvard University Press, 1959. Pp. 353.

Nelson, James C. Railroad Transportation and Public Policy. Washington: The Brookings Institution, 1959. Pp. xiii + 512.

Slichter, Sumner A. Union Policies and Industrial Management. Washington: The Brookings Institution, 1941. Pp. xiv + 597.

Williams, Ernest W., Jr. The Regulation of Rail-Motor Rate Competition. New York: Harper Co., 1958. Pp. 343.

B. PUBLICATIONS OF THE GOVERNMENT, LEARNED SOCIETIES AND OTHER ORGANIZATIONS

National Mediation Board. Administration of the Railway Labor Act by the National Mediation Board, 1934-1957. Washington: Government Printing Office, 1958.

_____. Interpretations Issued by the National Mediation Board Pursuant to Section 5, Second, of the Railway Labor Act. Washington: Government Printing Office, 1961.

_____. Twenty Years Under the Railway Labor Act, Amended, 1934-1954. Washington: Government Printing Office, 1955.

Ripley, William Z. "Railway Wage Schedules and Agreements," Report of the Eight-Hour Commission, U. S. House of Representatives, 65th Congress, 2nd. Session. Washington: Government Printing Office, 1918.

Williams, Earnest W., Jr. and David W. Bluenose, Rationale of Federal Transportation Policy, United States Department of Commerce. Washington: Government Printing Office, April, 1960.

Interstate Commerce Commission. Transport Economics. Bureau of Transport Economics and Statistics. Washington: Interstate Commerce Commission, selected years.

_____. Monthly Report of Employees, Service, and Compensation, ICC Wage Statistics, Form B. Washington: Interstate Commerce Commission, 1960.

_____. Rulings of the Interstate Commerce Commission.

_____. Increased Rates, Fares and Charges, 1946, 264 I.C.C. 695, 266, also I.C.C. 537.

_____. Increased Freight Rates, 1947, 269 I.C.C. 33, 270 I.C.C. 81, 270 I.C.C. 93, 270 I.C.C. 403.

_____. Increased Freight Rates, 1948, 272 I.C.C. 695, 276 I.C.C. 9.

_____. Increased Freight Rates, 1951, 280 I.C.C. 179, 281 I.C.C. 557, 284 I.C.C. 429.

_____. Increased Freight Rates, 1956, 298 I.C.C. 279.

_____. Increased Freight Rates, Eastern and Western Territories, 1956, 299 I.C.C. 429 and 299 I.C.C. 557.

Presidential Advisory Committee on Transport Policy. Revision of Federal Transportation Policy. Washington: Government Printing Office, 1955.

Presidential Emergency Board. Pennsylvania Railroad and the Transport Worker's Union of America, Order No. 10877, NMB Cases A-5949, E-134. Washington: Government Printing Office, May 20, 1960.

Presidential Railroad Commission. Report of the Presidential Railroad Commission. A Special Report prepared by the Commission established by Executive Order No. 10891. Washington: Government Printing Office, 1962.

United States Department of Commerce. Federal Transportation Policy and Program. Washington: Government Printing Office, March, 1960.

United States Department of Labor. Employment and Earnings Statistics for the United States, 1909-60. A Report prepared by the Bureau of Labor Statistics. Washington: Government Printing Office, 1961.

United States Congress, Senate, Committee on Surface Transportation. Problems of the Railroads. Hearings before Subcommittee, 86th Congress, 2nd. Session. Washington: Government Printing Office, 1957.

_____. Senate, Hearings before Subcommittee, 86th Congress, 1st. Session. Railroad Retirement. Washington: Government Printing Office, 1959.

_____. Senate, Committee on Commerce. Transportation Policies in the United States. Hearings before the Committee, 87th Congress, 1st. Session. Washington: Government Printing Office, 1961.

Association of American Railroads. Facts About Featherbedding in the Railroad Industry. Washington: Association of American Railroads, 1960.

_____. Magna Carta for Transportation. Washington: Association of American Railroads, 1961.

_____. A Review of Railroad Operations in 1960, Special Series No. 95. Washington: Association of American Railroads, 1961.

_____. Statistics of Railroads of Class I in the United States, Years 1950-1960. Washington: Association of American Railroads, 1961.

Loomis, Daniel P. Year of Decision: Clear Track or Crisis? Washington: Association of American Railroads, 1959.

Railway Labor Executives Association. The Truth About the Railroads. An address by G. E. Leighty, Chairman. Washington: Railway Labor Executives Association, 1959.

_____. Shall the Public be Damned? An address by George M. Harrison, Grand President of the Brotherhood of Railway Clerks. Washington: Railway Labor Executives' Association, September, 1961.

National Association of Railroad and Utilities Commissioners Railroad Problems. Report of the Special Committee to study railroad problems. Washington: National Association of Railroad and Utilities Commissioners, 1960.

Research Committee of the Aeronautical Research Foundation Avoidable Costs of Passenger Train Service. Cambridge: Aeronautical Research Foundation, 1957.

C. PERIODICALS

Backman, Jules. "The Size of Crews," Labor Law Journal, XII (1961), 805-806.

Harbeson, Robert W. "Transportation: Achilles Heel of National Security," Political Science Quarterly (June, 1959), p. 589.

Horowitz, Morris A. "The Diesel Fireman Issue on the Railroads," Industrial and Labor Relations Review, XIII (1960), 558.

Horowitz, Morris A. "Wage Guarantees of Road Service Employees of American Railroads," The American Economic Review, XLV (1955), 854.

Sullivan, James R. "Why Railroads Featherbeds Must Go!" Railway Digest, XIV, No. 4 (April, 1959), 3.

Wilson, G. W. "Current Criticism of the I.C.C.," Current Economic Comments, XXI (1959), p. 440.

D. NEWSPAPERS

Trainmen News, August 7, 1961.

Newsletter from the Five Rail Operating Brotherhoods, 1960-1961.

APPENDIX A

TABLE SHOWING TIME AFTER WHICH OVERTIME ACCRUES ON RUNS 100 TO 199 MILES IN LENGTH, ON SPEED BASIS OF 12½ MILES PER HOUR

Distance Miles	Overtime accrues after Hours	Distance Miles	Overtime accrues after Hours	Distance Miles	Overtime accrues after Hours	Distance Miles	Overtime accrues after Hours
100	8:00	125	10:00	150	12:00	175	14:00
101	8:05	126	10:05	151	12:05	176	14:05
102	8:10	127	10:10	152	12:10	177	14:10
103	8:14	128	10:14	153	12:14	178	14:14
104	8:19	129	10:19	154	12:19	179	14:19
105	8:24	130	10:24	155	12:24	180	14:24
106	8:29	131	10:29	156	12:29	181	14:29
107	8:34	132	10:34	157	12:34	182	14:34
108	8:38	133	10:38	158	12:38	183	14:38
109	8:43	134	10:43	159	12:43	184	14:43
110	8:48	135	10:48	160	12:48	185	14:48
111	8:53	136	10:53	161	12:53	186	14:53
112	8:58	137	10:58	162	12:58	187	14:58
113	9:02	138	11:02	163	13:02	188	15:02
114	9:07	139	11:07	164	13:07	189	15:07
115	9:12	140	11:12	165	13:12	190	15:12
116	9:17	141	11:17	166	13:17	191	15:17
117	9:22	142	11:22	167	13:22	192	15:22
118	9:26	143	11:26	168	13:26	193	15:26
119	9:31	144	11:31	169	13:31	194	15:31
120	9:36	145	11:36	170	13:36	195	15:36
121	9:41	146	11:41	171	13:41	196	15:41
122	9:46	147	11:46	172	13:46	197	15:46
123	9:50	148	11:50	173	13:50	198	15:50
124	9:55	149	11:55	174	13:55	199	15:55

Source: Schedule of Wages of Locomotive Engineers, Illinois Central Railroad, March 1, 1953, p. 95.

APPENDIX A(2)

TABLE SHOWING TIME AND ONE-HALF OVERTIME EXPRESSED IN MILES (18-3/4 MILES). APPLICABLE ONLY TO SERVICE FOR WHICH FREIGHT RATE APPLIES

Hr.:Min.	Miles	Hr.:Min.	Miles	Hr.:Min.	Miles	Hr.:Min.	Miles
3	1	2:05	39	4:06	77	6:05	114
6	2	2:08	40	4:10	78	6:08	115
10	3	2:11	41	4:13	79	6:11	116
13	4	2:14	42	4:16	80	6:14	117
16	5	2:18	43	4:19	81	6:18	118
19	6	2:21	44	4:22	82	6:21	119
22	7	2:24	45	4:26	83	6:24	120
26	8	2:27	46	4:29	84	6:27	121
29	9	2:30	47	4:32	85	6:30	122
32	10	2:34	48	4:35	86	6:34	123
35	11	2:37	49	4:38	87	6:37	124
38	12	2:40	50	4:42	88	6:40	125
42	13	2:43	51	4:45	89	6:43	126
45	14	2:46	52	4:48	90	6:46	127
48	15	2:50	53	4:51	91	6:50	128
51	16	2:53	54	4:54	92	6:53	129
54	17	2:56	55	4:58	93	6:56	130
58	18	2:59	56	5:01	94	6:59	131
1:01	19	3:02	57	5:04	95	7:02	132
1:04	20	3:06	58	5:07	96	7:06	133
1:07	21	3:09	59	5:10	97	7:09	134
1:10	22	3:12	60	5:14	98	7:12	135
1:14	23	3:15	61	5:17	99	7:15	136
1:17	24	3:18	62	5:20	100	7:18	137
1:20	25	3:22	63	5:23	101	7:22	138
1:23	26	3:25	64	5:26	102	7:25	139
1:26	27	3:28	65	5:30	103	7:28	140
1:30	28	3:31	66	5:33	104	7:31	141
1:33	29	3:34	67	5:36	105	7:34	142
1:36	30	3:38	68	5:39	106	7:38	143
1:39	31	3:41	69	5:42	107	7:41	144
1:42	32	3:44	70	5:46	108	7:44	145
1:46	33	3:47	71	5:49	109	7:47	146
1:49	34	3:50	72	5:52	110	7:50	147
1:52	35	3:54	73	5:55	111	7:54	148
1:55	36	3:57	74	5:58	112	7:57	149
1:58	37	4:00	75	6:02	113	8:00	150
2:02	38	4:03	76				

Source: Schedule of Wages of Locomotive Engineers, Illinois Central Railroad, March 1, 1953, p. 96.

APPENDIX B

DISPATCH FREIGHT SCHEDULE

ILLINOIS CENTRAL RAILROAD

Chicago to East St. Louis

	CS-3	CS-7	CS-5
L - Chicago		7:00 P	
L - Markham	9:00 A	8:10 P	10:00 P
Richton	9:30 A	8:30 P	10:30 P
A - Clinton (E.Jct)	1:40 P	11:45 P	2:15 A
L - Clinton	2:10 P	1:45 A	3:30 A
A - Madison	8:00 P	5:45 A	7:30 A
A - E. St. Louis	9:00 P	7:00 A	8:30 A

East St. Louis to Chicago

	SC-2	SC-4	SC-6
L - E. St. Louis "B"	3:00 P	12:30 A	5:00 A
L - Madison	3:40 P	1:15 A	5:45 A
A - Clinton	7:40 P	5:40 A	12:30 P
L - Clinton (E.Jct)	8:30 P	6:25 A	2:00 P
Richton	11:30 P	10:00 A	7:15 P
A - Markham	12:01 A	10:30 A	8:00 P
A - Congress St.	1:20 A		

- - - - - - - - - - - - - -

Meridian to Shreveport

Shreveport to Meridian

MS-9		SM-2
9:30 P	L - Meridian	A - 9:30 P
1:15 A	A - Jackson,M.	L - 6:30 P
3:30 A	L - Jackson,M.	A - 6:10 P
6:30 A	A - Vicksburg	L - 4:50 P
9:00 A	L - Vicksburg	A - 3:50 P
4:00 P	A - Shreveport	L - 10:00 A

APPENDIX C

RATES OF PAY EFFECTIVE MARCH 1, 1961

ENGINEERS

ILLINOIS CENTRAL RAILROAD

Weight on Drivers	Passenger Per 100 Miles	Freight Per 100 Miles	Local Per 100 Miles
Less than 100,000 lbs.	$20.26		
100,000 - 140,000 lbs.	20.35	$21.79	$22.35
140,000 - 170,000 lbs.	20.43		
170,000 - 200,000 lbs.	20.52	22.22	22.78
200,000 - 250,000 lbs.	20.61	22.39	22.95
250,000 - 300,000 lbs.	20.69	22.54	23.10
300,000 - 350,000 lbs.	20.78	22.69	23.25
350,000 - 400,000 lbs.	20.86	22.90	23.46
400,000 - 450,000 lbs.	20.95	23.11	23.67
450,000 - 500,000 lbs.	21.04	23.32	23.88
500,000 - 550,000 lbs.	21.12	23.53	24.09
550,000 - 600,000 lbs.	21.21	23.71	24.27
600,000 - 650,000 lbs.	21.29	23.89	24.45
650,000 - 700,000 lbs.	21.38	24.07	24.63
700,000 - 750,000 lbs.	21.46	24.25	24.81
750,000 - 800,000 lbs.	21.55	24.43	24.99
800,000 - 850,000 lbs.	21.63	24.61	25.17
850,000 - 900,000 lbs.	21.72	24.79	25.35
900,000 - 950,000 lbs.	21.80	24.97	25.53
950,000 - 1,000,000 lbs.	21.89[a]	25.15[b]	25.71[b]
Minimum Day	21.78	--	23.30[c]

Article 1

Breaking in engines for service, per hour 2.63-3/4
Deadheading on company business 20.01
Jull snow plow, per hour 2.86-1/4
Watching engines, per hour..... 2.62-3/4
Chicago elec. suburban serv., per 100 mi. 20.80

Article 6

Overtime, per hour 2.58-1/4
Overtime, per hour, Chicago suburban service .. 2.72

---

[a]With 8¢ and 9¢ alternately added for each additional 50,000 lbs. or fraction thereof.

[b]With 18¢ added for each additional 50,000 lbs., or fraction thereof.

[c]Also applicable to work train service--not applicable to any runs now subject to other guarantees.

APPENDIX D

AVERAGE SPEED OF COAL RUN PADUCAH, KY.-BLUFORD, ILL.*

Date	Hours	Miles	Average Speed	Avg. No. Cars Full	Avg. No. Cars Empty
April 16	4:35	95.07	21.86 mph	195	29
April 17	4:20	95.07	22.64	177	22
April 18	5:25	95.07	18.11	29	0
April 19	4:30	95.07	22.11	185	20
April 19	4:00	95.07	23.77	185	21
April 20	3:35	95.07	28.38	184	17
April 20	4:50	95.07	21.13	205	17
April 21	3:33	95.07	28.55	164	43
April 21	4:55	95.07	20.89	190	17
Average	4:39		23.09 mph		

*From Trainmaster's "Train-sheets," April 16-21, 1961.

APPENDIX E

ANNUAL EARNINGS OF NON-SUPERVISORY EMPLOYEES IN SELECTED INDUSTRIES YEAR 1960[a]

Classification	Avg. Weekly Earnings	Avg. Hourly Earnings	Avg. Annual Earnings
Flat Glass	$127.35	$3.16	$6 620.70
Petroleum Refining	123.22	3.02	6 407.44
Engine and Turbines	120.90	3.00	6 286.80
Tires and Inner Tubes	116.33	2.96	6 039.16
Blast Furnaces and Basic Steel	116.13	3.04	6 034.76
Motor Vehicles	118.20	2.89	6 146.40
All Class I Railroads	108.84	2.61	5 659.68
Motor Freight Transportation[b]	104.17	2.51	5 416.84
Steel Foundries	101.66	2.60	5 366.32
Fabricated Metal Products	98.82	2.44	5 128.64
Electrical Equipment and Supplies	90.74	2.28	4 718.48

[a]Source: Bureau of Labor Statistics, Employment and Earnings Statistics for the United States, 1909-60. (Washington: United States Department of Labor, Bulletin No. 1312, 1961).

[b]Statistics on Air Transportation not available.

VITA

The author was born in Silver City, New Mexico, on March 18, 1923. Graduation from High School was at Mohave County Union High in Kingman, Arizona, in 1940.

Higher education consisted of the B.A. degree from New Mexico Western College, Silver City, New Mexico, in 1949; the M.A. degree from Baylor University, Waco, Texas, in 1950 and the Ph.D. degree from Louisiana State University in 1962.

The author was employed as a Statistical-Analyst at Esso Standard Oil Company in Baton Rouge, Louisiana, from 1951-1957. The author has been Assistant Professor of Economics at Northwestern State College of Louisiana from 1959 to the present.

EXAMINATION AND THESIS REPORT

Candidate: Philip Duriez

Major Field: Economics

Title of Thesis: The Effects of Make-Work Rules on Railroad Revenue

Approved:

James P. Payne, Jr.
Major Professor and Chairman

Max Goodrich
Dean of the Graduate School

EXAMINING COMMITTEE:

J. Ray Marshall

B. F. Kiker

L. L. Mitchell

R. V. Clarke

Date of Examination:

July 11, 1962